The # of Growlers

SAR Report for Growlers – 2015
Attached is the official congressional-approved Program of Record Selected Acquisition Report (SAR)
It shows a total of 150 Growlers approved by congress (135 up through 2012, 15 more since)

Some interesting facts we can use in our discussions and fact sheets:

Program Acquisition Unit cost - total costs divided by units planned: $81.2M per Growler
Total program acquisition cost: $ 14.395 Bn
Expended to date (FY2015): $10.132 Bn

Deliveries:
Planned to date (FY2015): 113
Actual: 116
Total planned: 150
Delivery rate: 2/month

Larry Morrell
larry@larrymorrell.com
(b) (6)

Navy still NOT clear about how many will be coming to Whidbey Island —

2012 to 2014		**Under 2012 FEA**		
2012 EA Counts		Baseline		
CVW	9	5	45	
Flt Rpl	0	12	0	Add up to 11 Jets
				"Potentially relocate from Andrews, Md." -
Reserve	0	5	0	expeditionary - incld in Expedit. Squadron
Expedit.	3	4	12	
		Total	**57**	**Jives with 2003 FEIS**
Which Alt. did the Navy Pick?				
Alt 1				
CVW	9	5	45	
Flt Rpl	1	12	12	
Flt Rpl - Exped.	1	6	6	
Reserve	0	5	0	
Expedit.	3	5	15	Added:
			78	**21**
Alt 2				
CVW	9	5	45	
Flt Rpl	1	12	12	
Flt Rpl - Exped.	1	6	6	
Reserve	1	5	5	
Expedit.	3	5	15	Added:
			83	**26**
This one seems to match the current EIS Baseline				
Alt 3				
CVW	9	5	45	
Flt Rpl	1	12	12	
Flt Rpl - Exped.	1	11	11	
Reserve	1	5	5	
Expedit.	2	5	10	Added:
			83	**26**

Growler count from the 2012 EA and aligns with your numbers - they add

up to 83 Growlers after all the "up to" options are exhausted.
Since the 2012 FEA did not add any carrier-capable pilots (only expeditionary squadrons were augmented), the number of FCLP was not changed from 2003?

That may not have been exactly kosher since it augmented the Fleet Replacement Squadron from which the training is done and some of those planes and new instructors would almost certainly be doing FCLPs. It got around this by declaring these jets are only expeditionary force increases? - but was silent on how the instructors would keep their skills up?

And now after all this counting, in this DEIS - just counting the jets that could be deployed on carriers, thus requiring FCLP-
What's not stated is whether the Flt Replacement Jets - some? - are in the FCLP pool or not.

Depending on how it's all counted, the Growlers jets/pilots requiring FCLP training go from 62 to as many as 97 - that's 156% over the baseline.
So how do they get up to 575% of baseline for FCLP? Are they training 4 times harder now?

Do you know if the expeditionary jets are equipped for carrier landing? tail hooks, etc?

Since the training is dependent really on number of pilots, not the number of jets, all this assumes that the jets and pilot numbers are roughly equivalent.

Larry Morrell
Haven't found much on actual operational plans - that may not be public. I.e. how many are "spares" how many will be ready on the flight light, etc.

We can infer that 118 are expected to be mission ready and the rest will be cycled in as needed from maintenance. A friend of mine - Retired AF Col who had a Growler squadron under his command a few years ago- said the operational readiness of the new generation of jets is abysmal. So commanders (graded on readiness) are stockpiling spares so when something breaks, a backup is ready to go. And the sequestration hiccup put a lot of maintenance on hold, so broken things did not get fixed and the

backlog is still being felt.

But that's a lot of spares.
From Rick Larson's response to "where are all these Growlers going?" in 2014 --

There were 15 more planes purchased and 18 more scheduled for production since this was written.

The table below shows the current locations and status of all Growlers as of October 15, 2014:

Number of Aircraft			Location	Description
135	94	82	NASWI	Actively operating at NASWI
		12	NASWI	Inactive at NASWI, to be used in case an aircraft becomes inoperable
	5		Naval Air Facility Atsugi	Forward deployed to Japan
	36		Naval Air Systems Command (NAVAIR) headquartered in Maryland; awaiting delivery; not yet built	For research, development, and testing of various technologies, as we discussed at the meeting.

The 22 Growlers in the Navy's unfunded request this year are outside the scope of the POR. If Congress votes to buy any of these aircraft the POR would increase by that number.

Larry Morrell
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Larry email – number of jets - jan 10

Going over my history/collection of the Growler program
- starting at 57 jets to replace the 72 Prowlers - declared in 2005 and reaffirmed in 2010.

The October 2012 EA added 26 including 5 from the reserve unit that were transferred - new total is 57+26 = 83
In November 2012, the chief of Naval operations said there was an expected buy of 114 Growlers.
This must be when COER insisted on a full EIS?

The November 2016 EIS adds 36 for a total of 119 (a few jets have gone missing..)

However, (see below) Chief of Naval operations Greenert is quoted in Dec of 2015: planned purchase of 153 Growlers. Where are they going?

Navy has a history of ordering jets, then as they are being delivered - do the EIS "paperwork" - not really a process, more of a required activity.

Isn't that COUNTER to the intent of the NEPA process?

I think we are being played for stooges.

***Total number of Growlers at NASWI - from Chom Greacen Lopez Island**

*At the Navy's Open House public meeting on Lopez Island on December 7, 2016, I had a chance to talk to a senior officer in uniform who I learned was from Norfolk, VA (Naval Facilities Engineering Command Atlantic?). He informed me that there were currently over 100 Growlers already stationed at NASWI, and that the number would increase to roughly 160 when all the procured Growlers were manufactured, tested, and flown one by one to Whidbey Island. Based on the draft EIS, there will be a maximum of 118 Growlers in active operations. If the total number of procured Growlers to be stationed at NASWI is 160 as I was informed by the senior officer, this means the remaining 42 Growlers will be "spare"? Given the costs involved, it is difficult to believe that 42 spare Growlers are needed for an active fleet of 118. Is it possible that additional Growlers may be further added to the current proposed addition of 35-36 Growlers to the existing 82 in active operations? If so, why is there no mention in the current EIS process? If not, what kind of maintenance routines would be needed to keep spare Growlers in good working conditions year after year? Do they have to be "run" occasionally to keep engines in working order? At a minimum, the draft EIS should include a description of the maintenance routines of these spare Growlers and an analysis of their potential environmental impacts, including noise and air emissions.

***Recommendations:** The Navy should provide details regarding plans for all the 160 Growlers at NASWI in the draft EIS, at least for the accumulative impact analysis to be complete and meaningful. The draft EIS should also include impact analysis of the maintenance routines of spare Growlers.

FIRST Growler

Also, the first Growler was here in 2009 – not 2005, which would mean that our 7 years is 2016. How do we verify that date? It makes no sense to contest an EA about a transition of aircraft if the aircraft is not actually there. This makes no sense and does not protect the public – only the interests of the Navy. They were not making much impact until 2010 and then 2012 when Growlers became the dominate aircraft over the Prowlers. We could FOIA how many Growler flights there were in each year -- 2009, 10, 11, 12 1and 12. Or, maybe the 7 years should start from when we filed suit in 2013? The Navy and their supporters always seem so gleeful that we missed the 7 year date – so I think there is clear intention that the Navy was using the system. How do we get around that?

Thanks Michael for adding to the confusion of when the clock starts. However, the second sentence in the EA 12 Abstract states:

The EA evaluates the potential environmental effects of transitioning the Expeditionary VAQ squadrons at NAS Whidbey Island from the aging EA-6B Prowler to the newer EA-18G Growler in the 2012-2014 timeframe.

So, the official transition was to start in 2012, and the EA was evaluating that change from Prowler to Growler. Based on that and because the EA's FONSI was officially signed October 2012, dunno, but sure seems like that FONSI starts the clock because how could it be legally challenged before it is issued?
Bob Wilbur

The base line is an important issue. I just don't know how to get my hands around this. We went from 57, to 82 to a proposed 118. And a base line fon this EIS is for 2021 —it is just insane. The literal regulations for NEPA – maybe there is something there. I believe the intention is that the impact should be studied prior to the harms being done to the public (if there are any). The transition from one aircraft to another should have been a one-to –one comparison. 57 Growlers replaced 72 Prowlers. We weren't able to prove that the harms were more significant than predicted in federal court but that doesn't mean that line of

thinking was wrong.

Amending the EIS to add 22 more Growlers (the ones they asked for) and now the 36 that Congress gave them is a lot of added jets that have never had their cumulative impacts studied.

The cart is definitely in front of the horse. Isn't there some legal precedence that blocks a major expansion before the impacts are studied. Going from 57 Prowlers to 118 Growlers is a significant increase as well as also increasing the number of operations so significantly – is more than a significant impact!
If all of the aircraft are in place – how could a decision be made to get rid of them if negative impacts are demonstrated? Where is the public protection in this process?

FROM NAVY FACT SHEET
Assembly of the first EA-18G flight test aircraft began in October 2004, and the first flight test aircraft moved into modification in late April 2005, ahead of schedule. The first production aircraft made its first flight on Sept. 10, 2007, and was delivered to the U.S. Navy on Sept. 24, 2007, almost one month ahead of schedule. The first production aircraft was delivered to Fleet Readiness Squadron VAQ-129 at Naval Air Station Whidbey Island, Wash., on June 3, 2008, and the aircraft began its initial sea trials in August 2008. The Growler completed initial sea trials onboard the USS *Dwight D. Eisenhower* in August 2008. The Growler completed Initial Operational Test and Evaluation in May 2009 and achieved initial operational capability in September 2009. The Department of Defense authorized the EA-18G to enter into Full Rate Production in November 2009. The EA-18G's initial combat deployment occurred in late 2010 and concluded in mid-2011, supporting operations in Iraq and Libya.

ENVIRONMENTAL ASSESSMENT FOR THE TRANSITION OF EXPEDITIONARY EA-6B PROWLER SQUADRONS TO EA-18G GROWLER AT NAVAL AIR STATION WHIDBEY ISLAND, Oak Harbor, WASHINGTON
July 2012

The proposed action addressed in this environmental assessment (EA) is the transition of the Expeditionary electronic attack (VAQ) squadrons at Naval Air Station (NAS) Whidbey Island, Washington from the aging EA-6B Prowler aircraft

to the newer EA-18G Growler aircraft. The EAevaluates the potential environmental effects of transitioning the Expeditionary electronic attack (VAQ)squadrons at NAS Whidbey Island from the aging EA-6B Prowler to the newer EA-18G Growler in the 2012-2014 timeframe. The proposed action includes retaining the existing Expeditionary VAQ mission capabilities at NAS Whidbey Island; performing the in-place transition of three existing Expeditionary VAQ squadrons homebased at NAS Whidbey Island from the EA-6B aircraft to the EA-18G aircraft; potentially relocating one Reserve Expeditionary VAQ EA-6B squadron from Joint Base Andrews toNAS Whidbey Island and transitioning from the EA-6B aircraft to the EA-18G aircraft; adding up to 11 EA-18G aircraft to the Fleet Replacement Squadron (FRS) at NAS Whidbey Island to support the Expeditionary VAQ community; modifying certain facilities at Ault Field to provide facilities and functions to support the new aircraft type; and a modest increase in personnel to support the Expeditionary VAQ community. The purpose of the proposed action is to provide deployable land-based Expeditionary electronic attack community assets that meet Department of Defense requirements. The proposed action is needed to retain the Expeditionary VAQ mission and capabilities.

ES.2 Description of the Proposed Action

The Department of the Navy (DON) proposes to transition the Expeditionary VAQ squadrons at NAS Whidbey Island from the aging EA-6B Prowler to the newer EA-18G Growler in the 2012-2014 timeframe. This includes:

- Retaining the existing Expeditionary VAQ mission capabilities at NAS Whidbey Island
- In-place transitioning of three existing Expeditionary VAQ squadrons homebased at NASWhidbey Island from the older EA-6B aircraft to the newer EA-18G aircraft
- Potentially relocating one reserve Expeditionary VAQ EA-6B squadron from Joint Base Andrews to NAS Whidbey Island and transitioning this reserve squadron from the older EA-6B aircraft to the newer EA-18G aircraft
- Adding up to 11 EA-18G aircraft to the Fleet Replacement Squadron (FRS) at NAS Whidbey Island to support the Expeditionary VAQ community
- Modifying certain facilities at Ault Field to provide facilities and functions to support the new aircraft type and an increase in personnel (up to 311 personnel, representing a 3.1% increase in the base population) to support the Expeditionary VAQ community.

The purpose of the proposed action is to provide deployable land-based Expeditionary electronic attack community assets to meet Department of Defense requirements. The proposed action is to retain the Expeditionary VAQ mission and capabilities.

REVIRE OF NUMBERS"

■ Retaining the existing Expeditionary VAQ mission capabilities at NAS Whidbey Island— (a squadron equals 5 jets)

■ In-place transitioning of three existing Expeditionary VAQ squadrons homebased at NAS Whidbey Island from the older EA-6B aircraft to the newer EA-18G aircraft (3 squadrons ='s 15 Growlers)

■ Potentially relocating one reserve Expeditionary VAQ EA-6B squadron from Joint Base Andrews to NAS Whidbey Island and transitioning this reserve squadron from the olderEA-6B aircraft to the newer EA-18G aircraft (another 5 jets)

■ Adding up to 11 EA-18G aircraft to the Fleet Replacement Squadron (FRS) at NAS Whidbey Island to support the Expeditionary VAQ community (add 11 jets - maybe they haven't added all of these)

■ Modifying certain facilities at Ault Field to provide facilities and functions to support the new aircraft type and an increase in personnel (up to 311 personnel, representing a 3.1% increase in the base population) to support the Expeditionary VAQ community. The purpose of the proposed action is to provide deployable land-based Expeditionary electronic attack community assets to meet Department of Defense requirements. The proposed action is to retain the Expeditionary VAQ mission and capabilities. number?

The U.S Navy has ordered a total of 57 aircraft to replace its in-service EA-6B Prowlers, most of which will be based at NAS Whidbey Island. The US DoD gave approval for the EA-18G program to begin low-rate initial production in 2007.[16] The EA-18G was scheduled to finish flight testing in 2008.[17] The Navy planned to buy approximately 85 aircraft in 2008.[18] Approval for full-rate production was expected in the third quarter of 2009,[19] and was given on 23 November 2009. Boeing planned to ramp up production to 20 aircraft per year.[20] On 9 July 2009, General James Cartwright told the United States Senate Committee on Armed Services that the choice had been to continue the F/A-18 production line because the war fighting commanders needed more aerial electronic warfare capability that only the EA-18G could provide.[21]

Wikipedia: The Navy's submission for the 2011 defense budget put forth by the Obama Administration calls for four EA-18G Growler squadrons to be added to the fleet.[22] On 14 May 2010, Boeing and the US Department of Defense reached an agreement for a multi-year contract for an additional 66 F/A-18E/Fs and 58 EA-18Gs over the next four years. This will raise the total to 114 EA-18Gs on order.[23]

The Pentagon's Director of Operational Test and Evaluation determined that the EA-18G was "still not operationally suitable" in February 2011. Prime contractor Boeing is working to address issues with software updates.[24] In December 2011, Operational Test and Evaluation concluded that the EA-18G software was "operationally effective and suitable".[25]

On 19 December 2014, the Navy publicly reported that it wants to modify the production contract with Boeing to slow production of the Growler from three airplanes per month to two. It will also purchase an additional 15 Growlers, funded by a spending bill that will go to President Obama for signature in late December 2014. Boeing would then be able to continue running the St. Louis production line through 2017. Boeing has said it cannot sustain the production line at fewer than two airplanes per month.[26]

file:///Users/maryon/Desktop/%20maryonbackup/NEW%20FOIA-NAVY/Why%20the%20Navy%20Wants%20More%20Growlers%20-%20USNI%20News.html

AMENDING GROWLER EIS:

July 22, 2014

The Navy has just disclosed to COER's attorney, David Mann, in a June 16th Memorandum from Rear Admiral K. R. Slates that the Navy is probably going to "re-scope" the current Growler EIS with three additional alternatives, that appear to include more planes than previously reviewed. It appears they are looking at up to 34 additional planes over the current level of 82, which would be a total of 116 Growlers. Each of these alternatives would be implemented at NAS Whidbey Island. All jets would be designated as carrier-based, and as a result would need Flight Carrier Landing Practices (FCLP's), presumably at OLF Coupeville.

Evidently, this is allowed under NEPA regulations. Per NEPA requirements, we understand that the Navy must make an amendment via the Federal Register and re-open the scoping process for a new EIS. It is unclear at this time if only the Navy's amendment with three new alternatives can be added to the original EIS adding two new Growler squadrons or if it is significantly different and would require a new EIS. As the first scoping process initiated hundreds of comments, it is requested that any new EIS re-scoping comments be collected at locations throughout the Northern Puget Sound region.

If a new amended EIS is conducted, The Citizens of Ebey's Reserve (COER) believe that the Navy should be required, as submitted in our original request for an EIS in Federal court and agreed to by the Navy, to return to the flawed 2005 EA that concluded that there would be no community impact because the Growlers would be quieter and would fly less often.

Captain Nortier, Commander of NASWI, said NAS Whidbey Island suspended operations at the Outlying Field (OLF) in May 2013 for 11 month because the Navy had exceeded the estimate in the 2005 EA with 6,972 operations already completed.

COER and an independent noise professional (The Lily Noise Study, 2013) contend that the Growlers are louder than the Prowlers and that the frequency levels of the sound generated by them are unsafe. The Navy representatives in December 2013 stated that the noise from the Prowler and Growler is similar, but may seem louder due to differing frequency levels. Additionally, the Navy's EIS on the transition of the P8's to NASWI included a statement in 2014 that 98% of the noise at Ault Field at NASWI is generated by the Growlers - so the noise of the P8's would not be discernable.

Contrary to the Navy's assertions in their 2005 EA that the number of flight operations would decrease, the number significantly increased. According to the information released by the Navy through the Freedom of Information Act (FOIA), the number of annual flight operations at OLF over the past five years is as follows:
2008 – 20, 548; 2009 – 5,292; 2010 – 6,476; 2011 – 9,378; 2012 – 9,669; 2013 – 6,972 with operations up till May 2013 when they were suspended for 11 months by Captain Nortier.

As a result of the recent June Memorandum, we have several over-arching questions that require clarification.

1. What is the reason for making a change and making all Growlers, including all EA18 Growlers carrier-based, instead of ground-based at NASWI -- as was proposed in the Navy's 2005 EA?

2. Was this EIS study initiated in good faith? Months after the pubic scoping comments closed, the Navy is now intent to amend the EIS with 3 additional alternatives that will bring more jets than previously proposed. What is the reason for this dramatic change? Scoping meetings in impacted communities throughout the region should be conducted if the EIS is Amended and re-opened for comments.

3. Is Rear Admiral Slates Memorandum an end-run around Congress that recently denied the Navy's request for 22 new Growlers in the budget process? Is this a hedge by senior Navy personnel to mitigate their request of Congress for 22 additional Growlers by proposing up to 34 new Growlers be stationed at NAS Whidbey Island in amendments to the current Growler EIS? Is this a continued effort to keep the Missouri plant building Growlers in business?

4. Is the DOD and the U.S. Navy totally insensitive to the serious health and safety issues being caused by the Growler aircraft? COER has independent research conducted by faculty at the University of Washington that shows that noise levels over civilian American communities on Whidbey Island is above any standards designed to protect people from noise. It is clear that American people are being harmed. What protections do American citizens and their communities have in a post 9-11 culture where the military expenditures of our government exceed all other sectors of our economy? Are citizens of foreign countries better protected than American citizens?

In a recent legal suit in 2014, a judgment was made against the U.S. Navy based on health issues of a citizens in Japan: The Japanese government must pay $70 million to residents living near Naval Air Facility Atsugi as compensation for noise created by aircraft at the base, as reported by the Yokohama District Court and the U.S. government per treaty agreements must pay 75% of this cost. The Japanese court acknowledged the serious health hazards the noise has been inflicting on residents in the neighboring communities," Tokio Kaneko, deputy leader of the plaintiff's group, said in a phone interview with Stars and Stripes.

Whether the EIS is amended or must be re-opened, COER contends the Navy should include:

- A DRAFT EIS draft should be completed by the end of 2015. It is unreasonable for the local civilian communities in four counties to wait longer than originally promised by the Navy for a draft EIS, initiated in 2013. The new 2016 date proposed in an amendment could theoretically continue to be pushed out in time with new amendments proposed by the Navy.
    - On May 7, 2013 jet noise studies were conducted at 5 locations near OLF, Coupeville. The JGL Noise Study determined that maximum sound levels were clearly above levels requiring hearing protection and they surpassed Washington State, the U.S. Environmental Protection Agency and the World Wide Health Organization community noise protection guidelines.

- At least one new alternative should consider a No FCLP's alternative at the OLF.
    - COER requests that the new amended EIS consider the Navy's 2005 EA transition from Prowler to Growler as the starting place for assessing impacts, not after two Growler squadrons have been added. The intent of NEPA is to require an EIS when a change is made from one aircraft to another and where a significant change has occurred. What happened at OLF meets those requirements and the study should begin at 2005 with zero Growlers and no FCLPs.
    - While re-opening consideration of alternatives to the Growler EIS, we suggest that an additional New OLF alternative be consider that would close OLF, Coupeville.

- The Navy should be required to find alternative locations for FCLP's, as proposed by the Navy is a Navy Master Plan Update dated from 1986, and these should be prioritized for consideration in a new Navy alternative(s) for FCLP's.

Although the field is operationally important as a carrier qualification field, facilities at OLF Coupeville do not now meet criteria established for current FCLP operations levels. The following improvements are required:

a. Extend runways--
   Runway 14/32 from 5,400' to 8,800'
   Taxiway from 4,866' to 8,800'
b. Strengthen existing pavement
c. Improve roads and drainage
d. Acquire land in fee (APZ A lands outside the base) 71 acres.

The cost of bringing OLF Coupeville up to standard is approximately $8.75 million. Should operations at OLF Coupeville continue, it is likely that if planning and zoning alternatives were unsuccessful, extensive restrictive use easements would also have to be acquired since OLF Coupeville is in an area more prone to second home subdivision development than Ault Field.

- Cumulative Noise: The impacts from Prowlers to Growlers, including the proposed increase in numbers of squadrons, expanded squadrons, including the two new squadrons currently in the EIS and the 34 additional Growlers of jets the Navy is being added in an amendment to the EIS. To this increase should be added, the number of P8's and their flight paths and cumulative noise in the air space over Whidbey Island and Puget Sound in the scope of a new study.
  - The study must include the cumulative noise, environmental, economic, and health impacts of the jet aircraft at NASWI on the communities where overflights are occurring now and will be occurring when all of the jets are at NASWI: Prowlers, Growlers, and the new P'8s. The following communities being impacted by increasing Growler activities should include Jefferson, Island, San Juan, and Skagit Counties.

  - The EIS or amended EIS must include the impact of the number of Growler CCA operations, as well as FCLP's on noise impacts on individuals and to the affected communities (already listed).

- The one-site policy for stationing Growlers at NASWI should be reconsidered, as Puget Sound should not bear the sole responsibility for training pilots resulting in the degradation of Puget Sound's environment, health, economy, soundscape, and landscape and family-based culture.

The two 7 year periods of OLF operations reduced from initial year (1997 to 2002 and 2001 to 2009)....bob

Operations at OLF from 1990 to 2013. Data sources: 1990 from WNT article by Janis Reed; 1994 to 1999 from Table 3-1 in 2005 AICUZ; 2000 to 2013 from FOIA data from the Navy.

Number of operations by year		Number of operations by year		Number of operations by year	
1990	32,080[a]	2000	6,378	2010	6,476
1991	NA[b]	2001	3,568	2011	9,378
1992	NA	2002	4,100	2012	9,668
1993	NA	2003	7,682	2013	6,872[c]
1994	21,628	2004	4,314	2014	6120[d]
1995	19,954	2005	3,529		
1996	13,066	2006	3,413		
1997	9,736	2007	3,976		
1998	6,808	2008	2,548		
1999	6,752	2009	5,292		

Navy Welcomes New Era of Electronic Warfare

Story Number: NNS080604-08 Release Date: 6/4/2008 12:19:00 PM

By Mass Communication Specialist 2nd Class Tucker M. Yates, Fleet Public Affairs Center, Det. Northwest

OAK HARBOR, Wash. (NNS) -- Naval Air Station (NAS) Whidbey Island ushered in the next generation of naval electronic attack aircraft with the official arrival of its first EA-18G Growler, June 3.

The event marks the beginning of the long awaited transition to the Growler from the Vietnam-era EA-6B Prowler.

Presiding over the event were the Honorable Donald Winter, Secretary of the Navy; Jim Albaugh, executive vice president of The Boeing Company; U.S. Rep. Rick Larsen; Capt. Bradley Russell, commodore of Electronic Attack Wing, U.S. Pacific Fleet (CVWP); and Oak Harbor Mayor Jim Slowik.

"Thank you for inviting me to witness this landmark event in aviation history. Today marks the culmination point in a largely untold success story that began more than 17 years ago," said Winter. "I am pleased to note that this has been a success story and an excellent example of Navy contractor teamwork and collaboration. By leveraging and evolving legacy programs, the F-18 as a platform, and significant payload components from the EA-6B, this program now stands as a model case of what can be achieved."

As a more advanced and user-friendly aircraft, the Growler will only require two-man flight crews vice four for the Prowler. In the EA-6B, a pilot, navigator, and two electronic countermeasures officers were needed. The improved capability of the Growler requires less manpower, with only a pilot and an electronic warfare officer for in-flight missions.

"I've flown it, and I can tell you that both the naval flight officer in the back seat and the naval aviator in the front are going to be busy with their new responsibilities. There's going to be more information than you could possibly imagine at your fingertips," said Russell. "This is a big, fast, highly maneuverable jet that's going to give you total situational awareness to the battle-space out there. I tell you this: you're going to love your new office; however, let me caution you, crawl before you walk and walk before you run."

The Navy has placed an order of approximately 85 Growler aircraft. Of the 85, five will go to each of the 10 deploying Electronic Attack Squadrons (VAQ) and 12 are anticipated at the Fleet Replacement Squadron (FRS), VAQ-129. Upon acceptance of this aircraft by CVWP it will be used by VAQ-129 to train their flight crews to ensure they can proficiently train the remaining squadrons. The first deploying squadron to receive the Growler will be VAQ-132, in 2009.

"The full extent of the Growler's extraordinary capabilities cannot be disclosed, but we can say that this next generation aircraft is in a class by itself, combining airborne electronic attack with the newest technologies that belong to the Super Hornet Block II," said Winter.

Today the Growler and its pilots are poised to forge a game-changing path in the history of air warfare, cited Winter. "This platform is a direct threat to current and potential enemies, and it represents a quantum advance in warfare capability in the electronic domain."

For more news from Naval Air Station Whidbey Island, visit www.navy.mil/local/naswhidbey/.

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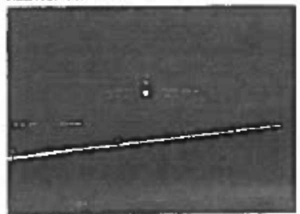

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070409-N-824794-018 WHIDBEY ISLAND, Wash. (April 9, 2007) - An EA-18G Growler lands at Naval Air Station Whidbey Island for the first time. The Growler is being developed to replace the fleet's current carrier-based EA-6B Prowler. The next-generation electronic attack aircraft, for the U.S. Navy, combines the combat-proven F/A-18 Super Hornet with a state-of-the-art electronic warfare avionics. The EA-18G is expected to enter initial operational capability in 2009. U.S. Navy photo by Mass Communication Specialist 1st Class Bruce McVicar (RELEASED)

April 9, 2007

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Navy's Next Generation Electronic Attack Aircraft, The E-A-18-G Growler

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5720
Ser RLSO/0552
July 17, 2014

Gendler and Mann, LLP
Attn: David S. Mann
936 N 34TH Street Suite 400
Seattle, Washington 98103

Dear Mr. Mann:

This responds to your Freedom of Information Act (FOIA) request of June 16, 2014, seeking:

1. All records documenting use of former Larson Air Force Base or former Ephrata Army Air Base in Grant County, Washington for FCLP practice by either EA-6B or EA 18-G aircraft based at NASWI between 1970 and the present. No records found.

2. All records documenting the when the first EA-18G aircraft arrived at NASWI.

3. All documents that identify the date that the EA-18G first began operations at OLF-Coupeville.

Your request was assigned FOIA Number 1426.

Review of the releaseable portions of items (2) and (3) reveal that they are partially exempt from disclosure under FOIA, exemption (b)(6), which protects personal data, such as names, and other Privacy Act protected information, the dissemination of which would constitute a clearly unwarranted invasion of personal privacy. There are no assessable fees associated with the processing of your request.

Because your request has been denied in part, you are advised of your right to appeal this determination, in writing, to the Office of the General Counsel, 1000 Navy Pentagon, Room 4E635, Washington, DC 20350-1000. Your appeal must be postmarked within 60 days from the date of this letter to be considered. Enclosure (2), a copy of this letter, should be attached along with a statement regarding why your appeal should be granted. Both the appeal letter and the envelope should bear the notation, "Freedom of Information Act Appeal."

Email Exchange Between Wilbur and Lilly

Wilbur to Jerry (March 13, 2016):

I'm pulling together a number of loose ends and need to check back with you re the yellow highlight below. To clarify, what we are interested in is when the BEUs in a year's time are X (e.g., 2,732 over 50 fly days = 136,000), then the two averaging methods open to the Navy would be (?) :

1) The 365 day averaging method for X, which looks like you used in example below (... if you experience 75 dB only 50 days of the year you would only receive 50*2,732 = 136,600 BEUs over the course of the year which would average out as 10*log (136,000*1,000,000,000/(60*60*24*365) = 66.4 dB.)

2) The 50 day averaging method for X, which based on the example below (... if you experience 75 dB only 50 days of the year you would only receive 50*2,732 = 136,600 BEUs over the course of the year which would average out as 10*log (136,000*1,000,000,000/(60*60*24*50) = 74.98 dB.)

Obviously, if the average/day = 2732 BEUs (75 dB), method 2 produces the same result for 50, 100, or 365 days of flying (i.e., the avg BEU x number of days/number of days is always = the avg BEU or 75 dB).

I think this points to the problem, I and others are having trying to define/understand the understand the difference between a busy-day annual average (#2) vs an all-day annual average (#1). To put the two metrics into words, #1 is the average DNL for busy days averaged over an entire year, whereas #2 is the average DNL for busy days in a year's time averaged over just those busy days. Both metrics would seem to have some value, but I think the rub is, since they do/can differ, is the Navy's use at OLF consistent with standard practice such that it allows comparison of apples to apples, or is it inconsistent (apple here to a pear elsewhere) and masquerading it as apple to apple.

Do you know or is that what we have to find out from the Admiral and did I get any of that wrong?

From: Jerry Lilly

Sent: Monday, February 01, 2016 4:32 PM

To: (b) (6)

Subject: RE: Comments?/Trash it?

Bob:

I think the problem may be decibels and the way they are averaged (because decibels are a logarithmic function of the acoustic pressure or energy). If we convert all sound levels to something I will call energy units, that might make it easier to understand. It turns out that at Position 1, each jet flyover has an average SEL of 113.1 dB. This is equal to 204,414,168,862 acoustical energy units (EU). If we define the fundamental unit as the billion energy unit (BEU), then each flyover is equivalent to 204.4 BEUs. If you have 20 flyovers, that is equivalent to 20*204.4 = 5,723.2 BEUs. There would be 1,430,800 BEUs in 5,000 flyovers.

The average DNL over any time period can be calculated from the total energy units received during the time period knowing the number of seconds in that time period. You can also work backwards and determine the total number of energy units received knowing the average DNL over any time period. For example, the 24-hour DNL from a single daytime flyover at Position 1 would be 204.4 BEUs would be = 10 log ((204.4*1,000,000,000)/(60*60*24)) = 63.7 dB. If the single flyover was at night the number of BEUs would be 2,044, and the DNL would be = 10 log (2044*1,000,000,000/(60*60*24) = 73.7 dB.

We can also convert the DNL criterion of 75 dB to energy units. Using the equation 75 dB = 10 log (X/T), where X is the number of energy units and T is the number of seconds in the DNL average. So for 24 hours, T = 60*60*24 = 86,400 seconds and X = 2,732,207,898,385 energy units, which is 2,732 BEUs. So you can think of the 75 dB DNL criterion as 2,732 billion energy units exposed over a 24-hour period. If you ignore night flights (just to make it simple), then you will reach your daily exposure limit of 75 dB DNL (or 2,732 BEUs) with 13.37 flyovers (note 2,732 divided by 204.4 = 13.37). You can average energy units as you would any other non-logarithmic term. If you were exposed to DNL 75 dB every day for a year, that would be equal to 2,732 BEUs times 365 days/year = 997,180 BEUs for the year. The average DNL for the year would be = 10 log (997,180*1,000,000,000/(86,400*365) = 75.0. However, if you experience 75 dB only 50 days of the year you would only receive 50*2,732 = 136,600 BEUs over the course of the year which would average out as 10*log (136,000*1,000,000,000/(60*60*24*365) = 66.4 dB.

So the basic question is whether or not noise exposure is cumulative like radiation where the decay time is thousands of years. I tend to think not. I think there is sufficient evidence to support the case of hearing loss as being cumulative over an extended time period, provided that the exposure level is not above 100 to 120 dBA. I believe that at extremely high levels permanent hearing loss can be immediate. In addition to hearing loss there is the issue of annoyance and reduced speech communication, which I believe that the noise contours around airports are based upon. I suspect that

the decay time of this response is much shorter than weeks or months, and certainly shorter than years, and that is why my opinion that an annual DNL for your site is not appropriate.

I will call you tomorrow around 10:30 AM just before I arrive.

Jerry G. Lilly, President, JGL Acoustics, Inc.

Misc. Noise Info from Our Experts

JGL email 1/04/2014

The SEL for a given session is only a function of the number of events, not the number of jets – unless the number of jets also affects the number of events. I use the word event to represent a single jet flyby. Usually, an SEL is assigned to a single flyby (hence the acronym Single Event Level), but I did not use that approach for your measurements because the jets were too close together. The noise from one jet was not over before the next jet arrived, so I measured the SEL of an entire session. Therefore, if an entire session is composed of N individual events and you wanted to calculate the SEL for a session of M identical individual events the difference in the SEL would be $-10 \log_{10} (N/M)$. For example, if N=30 and M=38 the SEL difference would be $-10 \log_{10} (30/38) = 1.0$ dB. This equation works both ways (increase or decrease in the number of events). Note, it would take a doubling of events, say going from 30 to 60 events, to increase the SEL by 3 dB. Likewise, reducing the number of events from 30 to 15 would decrease the SEL by 3 dB.

Like the SEL, the DNL is only affected by the total number of events assuming that you do not change the percentage of events at night. The single day DNL will be affected by the total number of events during a 24 hour period. The average annual DNL will only change if the total number of events per year changes (or the percentage of nighttime operations changes).

When the NOISEMAP (or any other approved) model is run, it should first be calibrated by comparing calculated and measured results at several locations. This is done by running the model under the precise conditions that occurred during the measurements. If the model and the measurements cannot be matched within a reasonable margin of error, another model should be used. I am not privy to the intricate details of the NOISEMAP software, but I would not be overly concerned about its ability or inability to accurately calculate low frequency noise at great distances. The attached graph presents the Growler noise spectrum that I measured at Position 1. As you can see, the low frequency noise is far below the mid-frequency noise. Errors in calculating low frequency noise will have no affect at all in the calculated DNL or SEL values in the areas inside the DNL 65 contours. That is not the case for listeners more than 5 or 10 miles away from the Coupeville OLF. Residents far away will only hear the low frequency noise, because the mid-frequency and high-frequency noise will be rapidly dissipated with

distance due to air absorption effects. You must keep in mind that the SEL and DNL values are based on A-weighted decibel levels, and the A-weighting filters out most of the low frequency noise. So even though the low frequency noise from the jets can be heard at great distances, the A-weighted sound level of this noise is very low (well below levels of concern to the Navy).

The other point I should make relates to the atmospheric conditions. Temperature profiles, humidity, and wind all can affect the resulting sound level, but these environmental effects are insignificant unless the listener is at least a mile or more away from the source. The greater the distance, the greater the effect. Sometimes the environmental conditions will cause the noise level to increase by 10 dB (or more) and other times it might decrease the level by 10 dB (or more). Atmospheric conditions will have no impact on the areas directly below (or within a mile of) the flight patterns.

Jerry Lilly JGL Acoustics, Inc., 5266 NW Village Park Drive, Issaquah, WA 98027

Excerpts from December 2015 email thread

Sandy Fidell wrote (in response to email from Ken P.):

> UNLESS YOU ENJOY PICKING FIGHTS WITH CITY HALL, IT'S NOT WORTH CHALLENGING DNL AS A MEASURE OF COMMUNITY RESPONSE TO AIRCRAFT NOISE EXPOSURE. INTERNATIONAL TECHNICAL CONSENSUS STANDARDS RECOMMEND THE NOISE METRIC FOR PREDICTING THE PREVALENCE OF ANNOYANCE DUE TO TRANSPORTATION NOISE EXPOSURE, AND COURTS WILL ALWAYS DEFER TO EXECUTIVE BRANCH AGENCIES ON POLICY-RELATED MEASURES (PARTLY BECAUSE THEY'RE SUPPOSED TO; PARTLY BECAUSE JUDGES ARE LAZY; AND PARTLY BECAUSE THE JUDICIARY IS ESSENTIALLY INNUMERATE.)
>
> RATHER THAN CHALLENGING DNL PER SE, YOU WOULD BE BETTER OFF ARGUING THAT THE FCLP OPERATIONS ARE NOT MERELY ANNOYING, BUT DISTURB SLEEP, AND ARE (ARGUABLY, IF NOT ACTUALLY) ASSOCIATED WITH ADVERSE HEALTH EFFECTS - SEE ATTACHED ARTICLE.

Jerry Lilly wrote in response:

> I'm not so sure that you should give up challenging the use of DNL. I think that you should also point out the fact that most of the noise annoyance research has been derived from studies of commercial airports, which not only have almost constant daily traffic, but also have lower maximum sound levels. Extrapolating that data base to military jets impacting civilian residents may be stretching things too thin. I suspect that if a study could be done that was exclusive to the situations similar to the OLF on Whidbey Island there would likely be a much different annoyance vs. DNL impact curve. Think of it this way: what if the government decided that the

we could only build homes in areas of the country where the average daily temperature did not exceed 90 degrees (over a 24 hour period). Sounds reasonable, right? Hot, but not unreasonable. Now imagine a location where the nighttime temperature is constant at 40 degrees for 8 hours and the daytime temperature is constant at 100 degrees for 12 hours, except for 4 hours when the temperature is 160 degrees. The daily average is 90 degrees, but this would obviously not be reasonable or tolerable. The other analogy that I like to use relates to putting one foot in a bucket of 40 degree water and the other in a bucket of 140 degree water. The average temperature of the two buckets is 90 degrees, so why aren't you comfortable?

To which Paul Schomer added:

This is exactly the point I have been trying to make, only I do not call it attacking DNL; rather I describe it as questioning the substaniated extention of DNL into untested and unsubstantiated regions so loud that hearing protection and warning signs are required. 65 dB for a year is 91 dB if it comes in one day, 140 dB in 1 second,and 170 dB in 1 ms-permanent hearing loss and damage to the ear but no impacts !!! Houses situated is if they were INSIDE a noisy factory where hearing protection was required but no impact !!!

All good points. I thinks Paul's point that 140 dB if it comes in 1 second equates to a 65 dB DNL should be an important point to make when it comes to shooting down DNL as useful when examining impacts of DNL on health.

Appendix A

Paul Schomer explained his calculations of the data in Tables 4.1 and 4.2 this way:

For hearing conservation a noise dose is established in general for an 8 hour workday or a 24 hour day. The navy criteria and presentation is for an 8 hour day. It is for the total dose during the 8 hour time period and it is set to 85 dB. This means that the dose is equal to what can be thought of as a constant 85 dB for 8 hours, or 480 minutes, or 28800 seconds. As a sound exposure this quantity is given by:

The square of the pressure corresponding to 85 dB, which is 10^(85/10) multiplied by the time in seconds. So as an energy we have 10^(85/10)*28800. If the sound level was 91 dB instead of 85, it would be 6 dB higher. So as an energy we would have a sound level of 10^(91/10), which can be written as 10^(85/10)*4, where 4 = 2^2=10^((2/10)*2). In terms of the Navy dose, the dose would be full for the day if someone was subjected to 91 dB for two hours, one fourth of their 8-hour day.

The calculations I did for you were for the 8-hour dose but it all occurred during the single flying period of 1 to 2 hours. It is computed by listing the number of seconds that exceed each of the following 3 dB increments but do not reach the level of the next increment. The 3 dB increments

are 85, 88, 91, 94, 97, 100, and so on. So what I note for each increment is the number of seconds exceeding the increment by being below the increments + 3dB. For example, in the tables in the attached spreadsheet this Navy dose is calculated for four outdoor source-positions and two flying periods.

Consider position 1 for the first flying period. 85 dBa is exceeded for 448 seconds, and of these 88 dBa is exceeded for 381. So there are (448-381=67) seconds that exceed 85 dB but are less than 88 dB. 67 seconds is 0.2 percent of the daily dose. Similarly, there are 21 seconds that exceed 109 dB and 8 seconds that exceed 112 dB. So there are 13 seconds that exceed 109 dB but are less than 112 dB. 13 seconds is 11 percent of the full daily dose of 112.5 seconds at 109 dB.

Adding all the percentages of daily dose in each increment yields the percent that the daily dose is exceeded during a single flying period. If the day has two flying periods then the total daily dose is 2 times the dose received during a single flying period. This is all shown in the table.

In two flying periods, position 1 will accrue a dose equal to 115% of the Navy's permitted 8-hour dose and position 4 will accrue a dose that is 92% of the Navy's permitted 8-hour dose.

His explanation above is based in the following:

§1926.52 Occupational noise exposure.

(a) Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in Table D-2 of this section when measured on the A-scale of a standard sound level meter at slow response.
(b) When employees are subjected to sound levels exceeding those listed in Table D-2 of this section, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of the table, personal protective equipment as required in subpart E, shall be provided and used to reduce sound levels within the levels of the table.
(c) If the variations in noise level involve maxima at intervals of 1 second or less, it is to be considered continuous.
(d)(1) In all cases where the sound levels exceed the values shown herein, a continuing, effective hearing conservation program shall be administered.

Table D-2—Permissible Noise Exposures

Duration per day	Sound level dBA slow response
8 hr.	90
6 hr.	92

4 hr.	95
3 hr.	97
2 hr.	100
1.5 hr.	102
1 hr.	105
30 min	110
≥15 min	115

(2)(i) When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each. Exposure to different levels for various periods of time shall be computed according to the formula set forth in paragraph (d)(2)(ii) of this section.

(ii) $F_e = (T_1/L_1) + (T_2/L_2) + \cdots + (T_n/L_n)$

Where:

F_e = The equivalent noise exposure factor.

T = The period of noise exposure at any essentially constant level.

L = The duration of the permissible noise exposure at the constant level (from Table D-2).

If the value of F_e exceeds unity (1) the exposure exceeds permissible levels.

(iii) A sample computation showing an application of the formula in paragraph (d)(2)(ii) of this section is as follows. An employee is exposed at these levels for these periods:

110 dbA ¼ hour.

100 dbA ½ hour.

90 dbA 1½ hours.

$F_e = (¼ / ½) + (½ / 2) + (1½ / 8)$

$F_e = 0.500 + 0.25 + 0.188$

$F_e = 0.938$

Since the value of F_e does not exceed unity, the exposure is within permissible limits.

(e) Exposure to impulsive or impact noise should not exceed 140 dB peak sound pressure level. <NOTE: Lilly's metrics show it close 130-135 dB, but not over.>

All,

I have analyzed the four positions using the navy form of hearing hazard. I have used as a baseline what I interpret to be one session of flying from all the numbers I've seen. This is the total measurement of positions one, two, three, and four, and I have interpreted that to be one session of flying. What I show is that in one session of flying, you get at position one 58% of the total permitted sound and 22%, 14%, and 46% for positions two, three, and four, respectively. I then show that, if you have two flying periods in a day, you have double the exposure and this comes out to be 115%, 45%, 29%, and 92% for the four positions respectively. What this says is that at two of the positions you have essentially 100% of the permitted occupational noise for one day. So if I interpret the Navy rules correctly, if this was on a Navy base, they would have to post it as a hearing hazard and require that hearing protection be worn. This is of course for outdoors, but what it says is that your house is located in a zone that's like a noisy factory floor and needs signs around it saying "hearing protection required".

I am including the spreadsheet with the calculations. Basically I take each sound level listed in the descriptive line on the left side of the table and columns C, D, E, and F contain the raw seconds above the indicated level for positions one, two, three, and four. Column H shows the permitted number of minutes at each level for 100% noise. So if you had a constant 88 dB it could be 240 minutes, or four hours. The columns I, J, K, and L contain the percent of the full Navy dose at the indicated levels. For example, for the level of 100 dB, the number of seconds above that level yields 5.6% of the total dose permitted if the sound level was a constant 100 dB. This is done by taking the difference between the seconds at this level and the seconds at the next higher level and subtracting the next higher level from this level to get only the increment crossing 100 but not 103, and then converting the seconds to minutes by dividing by 60, and then multiplying by 100 to get the ratio to a percent. This is done for all four positions and each level. Then the percentages are summed in each column to get the total percent of full dose exceeded. I multiply these by 2 for two flying sessions, and the result as you can see at position one is 115% of the full daily permitted dose. I do not see how someone can say there's no impact with a straight face when the house is in a zone like the inside of a factory, and where by Navy rules you have to post hearing hazard signs.

Just my thoughts.

Paul

	Cumulative time in seconds				
Statistic	Pos. 1	Pos. 2	Pos. 3	Pos. 4	Pos. 5
Total Time over 85 dBA (sec)	448	855	365	600	0
Total Time over 88 dBA (sec)	381	538	257	482	0
Total Time over 91 dBA (sec)	315	299	169	375	0
Total Time over 94 dBA (sec)	254	152	97	267	0
Total Time over 97 dBA (sec)	184	93	63	195	0
Total Time over 100 dBA (sec)	128	50	39	135	0
Total Time over 103 dBA (sec)	78	28	21	76	0
Total Time over 106 dBA (sec)	37	12	6	36	0
Total Time over 109 dBA (sec)	21	5	3	13	0
Total Time over 112 dBA (sec)	8	0	1	1	0
Total Time over 115 dBA (sec)	2	0	0	0	0
Percent of permitted daily noise exposure per flying period					
Number of flying periods per flying day					2
Total percent of permitted daily noise esposure					

0.1155556

sound,

Statistic	Pos. 1	Pos. 2	Pos. 3	Pos. 4	Pos. 5
Total Time over 85 dBA (sec)	128	50	39	135	0
Total Time over 88 dBA (sec)	78	28	21	76	0
Total Time over 91 dBA (sec)	37	12	6	36	0
Total Time over 94 dBA (sec)	21	5	3	13	0
Total Time over 97 dBA (sec)	8	0	1	1	0
Total Time over 100 dBA (sec)	2	0	0	0	0

Total Time over 103 dBA (sec)	0	0	0	0	0
Total Time over 106 dBA (sec)	0	0	0	0	0
Total Time over 109 dBA (sec)	0	0	0	0	0
Total Time over 112 dBA (sec)	0	0	0	0	0
Total Time over 115 dBA (sec)	0	0	0	0	0
Percent of permitted daily noise exposure per flying period					
Number of flying periods per flying day					2
Total percent of permitted daily noise esposure					

	Actual percent of full Navy dose exposure				
Navy full dose time exceeded (s)	Pos. 1	Pos. 2	Pos. 3	Pos. 4	Pos. 5
480	0.2	1.1	0.4	0.4	
240	0.5	1.7	0.6	0.7	
120	0.8	2.0	1.0	1.5	
60	1.9	1.6	0.9	2.0	
30	3.1	2.4	1.3	3.3	
15	5.6	2.4	2.0	6.6	
7.5	9.1	3.6	3.3	8.9	
3.75	7.1	3.1	1.3	10.2	
1.875	11.6	4.4	1.8	10.7	
0.9375	10.7	0.0	1.8	1.8	
0.46875	7.1	0.0	0.0	0.0	
	58	22	14	46	
	115	45	29	92	

Time for full exposure (m)	Pos. 1	Pos. 2	Pos. 3	Pos. 4	Pos. 5
480	0.2	0.1	0.1	0.2	
240	0.3	0.1	0.1	0.3	
120	0.2	0.1	0.0	0.3	
60	0.4	0.1	0.1	0.3	
30	0.3	0.0	0.1	0.1	
15	0.2	0.0	0.0	0.0	

7.5	0.0	0.0	0.0	0.0	
3.75	0.0	0.0	0.0	0.0	
1.875	0.0	0.0	0.0	0.0	
0.9375	0.0	0.0	0.0	0.0	
0.46875	0.0	0.0	0.0	0.0	
	2	0	0	1	
	3	1	1	2	

None of the 3 alternatives in the EIS is really a "no-action" alternative, because the Navy interprets "no action" to mean continuing its existing baseline activity, when in reality the law was meant to be interpreted as "no action means no action."
40 CFR 1502.14, 'Alternatives Including the Proposed Action,' states:

> (a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
> (b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.
> (c) Include reasonable alternatives not within the jurisdiction of the lead agency.
> (d) Include the alternative of no action.

The 9 different possible actions listed in the DEIS as alternatives are essentially one alternative (accept 35-36 new Growlers,) with other alternatives for deployment, non-deployment or training dismissed with no analysis. "No action" is considered only as a baseline. There is virtually no substantive difference in the environmental impact of the 9 scenarios described. The Navy has not made a good faith effort to explore other alternatives as NEPA requires in S40 CFR 1502.14 (a), listed above. All of the Navy's 'alternative' scenarios will increase noise, harm to health, and other adverse impacts. The Navy's "no action alternative" would continue Growler operations that currently expose people in homes, schools, parks and businesses to noise that exceeds community standards set by the State of Washington, the EPA, the Occupational and Health Administration (OSHA), and the World Health Organization. **Why is there no genuine no-action alternative?**

The Navy never adequately substantiated its need for non Defense Department lands, as was required by the 1988 Master Agreement; instead of proving that no DoD lands were available or suitable, it said using the Olympic Peninsula's public lands was for the purpose of saving $4 to $5 million dollars of jet fuel per year. Saving fuel is a good goal, but this reason does not prove that DoD lands were either unavailable or unsuitable, which was the primary requirement of the Master Agreement.

So how does the Navy justify all these training flights doing electronic warfare on non-DoD public lands for which it never properly justified to the public its reasons for using?

On page 5-19 of the EIS, electronic warfare is listed as a "relevant activity," and in the Abstract it states the proposed action would:

> "...increase electronic attack capabilities by adding 35 or 36 aircraft to support an expanded U.S. Department of Defense mission for identifying, tracking, and targeting in a complex electronic warfare environment."

So, with electronic attack being relevant to the EIS, it might be assumed that a discussion on impacts from training with this suite of electronic attack weapons would be included. The stated intent of the 2014 Electronic Warfare EA was to "turn out fully trained, combat-

ready electronic attack crews." However, it focused on the ground-based emitters and glossed over the airborne components of the training.

Nowhere do any Navy NEPA documents from the last 7 years discuss the risk of exposure to chronic downward-directed radiation from weaponized forms of directed energy aboard these jets, to civilians, wildlife and habitat.

The only discussion was a brief mention in the 2014 EA, in reference to radio transmitters on the mobile emitter trucks and the stationary transmitter at Pacific Beach. The Navy referenced a paper by Focke et al, and concluded that links from radiation exposure to leukemia were speculative, when in fact, that same paper stated unequivocally that there are direct links between radiation exposure and childhood leukemia. **Why is any mention or discussion of risks from exposure to electromagnetic radiation from Navy jets completely missing from all discussions of potential impacts?**

Navy's Draft Environmental Impact Statement: Comments & Talking Points

The Navy's DEIS does not adequately address the true environmental and public health consequences of planned Growler increases.

• **Toxic Noise**: The Navy wants to move ALL touch-and go Growler operations to the OLF. Operations would be increased up to 35,000 a year! The DEIS misrepresents the impacts of Growler noise. No measurements of noise were taken in communities – only computer modeling that averaged periods of noise with long periods of silence.

• **Health harms**; The DEIS ignores overwhelming scientific and medical evidence of harms caused by hazardous Growler noise. Growler noise has already created what one health expert labeled a "public health emergency that is literally killing people..."

• **Children and Education**: The DEIS states that increased Growler operations will cause "between 45-55 disruptions per HOUR in the Coupeville Schools". And, children may experience some cognitive damage due to increased noise.

• **Property Values**: Options being considered by the Navy would subject properties from Engle

Road and western Coupeville east to Saratoga Passage and from Penn Cove on the north to

Puget Sound to inclusion in an Accident Protection Zone (APZ) 1 or 2. Property values will

plummet. Even worse, all those APZ properties and many more beyond are in a Noise Zone 2

area, within which Island County may deny residential development.

• **Drinking Water Pollution** Coupeville's water supply well next to the OLF is contaminated with

the Navy's toxic chemicals at concerning levels. An accident at the OLF could cause more

contamination. Increasing operations by Navy Growlers will increases the threat to

Coupeville's drinking water.

• **Electronic Warfare**: Nowhere do any Navy NEPA documents from the last 7 years discuss the

risk of exposure to chronic downward-directed radiation from weaponized forms of directed

energy aboard Growlers, to civilians, wildlife and habitat. OLF has a stationary electromagnetic

emitter currently in use. Why is any mention or discussion of risks from exposure to

electromagnetic radiation from Navy jets completely missing from all discussions of potential

impacts?

The draft EIS does not comply with mandatory NEPA requirements to fully analyze off-Whidbey

training options (alternatives) for conducting touch and go practice. in a report of 1500 pages (over

the NRPA recommended 300 pages) the Navy has submitted an unreadable document short on data

and facts.

NPR —
3 to 5 weakest parts.

~~Jan~~ 25
~~APRIL~~ 24

Tuesday —

9:30 —

Agenda —

10 AM — Welcome — Cafe
— Nancy - Asked to Speak
[monitoring/time — Marianne]

(water)

5 minutes each —

1 POP — Olympic Peninsula
2 Stop
3 West Coast — Annette Sutton
4 N.A. Surfclub — Protect The Am. Future
5 Kyle Loring — San Juans
~~7~~ Cynthia Dillon \ Ce people

~~8~~ COER - growlers moved / FCLP's
water issue —
noise impact on Education.

(chapter 2)

→ Summary ~~discussion~~ (*)

Q&A - Marianne (packet / press release)
| White paper — Call/email

10:15
10:20
10:25
10:30
10:35
10:40
10:45
10:50
10:55
11:00

TO MERGE IN SOMEWHERE (?):

All About What the AICUZ is supposed to Do (but fails):

http://www.dtic.mil/whs/directives/corres/pdf/416557p.pdf

All About What Navy is to do to combat encroachment (but doesn't):
http://doni.daps.dla.mil/Directives/11000%20Facilities%20and%20Land%20Management%20Ashore/11-00%20Facilities%20and%20Activities%20Ashore%20Support/11010.40.pdf

No citation:

The Federal Aviation Administration has established this measure as a community noise exposure metric to aid airport noise analyses under Federal Aviation Regulation Part 150. The FAA says that a maximum day-night average sound level of 65 dB is incompatible with residential communities. Communities in affected areas may eligible for mitigation such as soundproofing. BUT NOW IN SECTION 6 (to be added) IT SHOULD BE 55 dB; will merge this in there.

1. Overview and Legal Framework

This paper assembles COERs noise information related to Outlying Field Coupeville (OLFC). The purpose is to bring the critical information, studies, findings and conclusions into one location for general reference and specific uses, primarily organizing our legal framework and arguments.

Our sound experts have recommended that we not attack DNL as an "inappropriate metric" because of its ubiquitous use as a community annoyance index and aid to community planning.

However, accepting that because of widespread use, however, should then allow us to argue that nearly ubiquitous use of sound exposure level (SEL) and related metrics to assess health impacts of noise is appropriate, not DNL. That said, we need to be able to analyze both metrics as they impact folks living near OLFC.

With regard to DNL, the following have been recommended by our noise experts as our strongest arguments:

1. That the Navy is not complying with well-established noise standards (nor those in its own AICUZ).

2. That the averaging method (all day vs. busy) used in calculating annual DNL contours may not follow standard practice, and that modeling without on-site validation fails to provide needed credibility.

With regard to sound exposure levels (SELs),

1. That the Navy's has designated hearing conservation zones and programs for those working in hazardous noise areas, but ignores that for residents of OLFC.
2. That impacts from the high noise events during the flyovers we experience cannot be credibly extrapolated from other studies because they are too unique (too little in situ data).

Sandy Fidell has pointed out, as it relates to both DNLs and single noise events, for NEPA-related purposes, such noise values are not measured or modeled simply for the sake of measurement or modeling, but are only meaningful with respect to interpretive criteria as they affect people. The new ISO 1996-1 standard may show that the Navy's conventional interpretive criteria for aircraft noise exposure are obsolete and incorrect and therefore not based in reliable contemporary technical information about the effects of aircraft noise on people.

The Navy's 2005 Air Installation Compatible Use Zones (AICUZ)[1] (pages 4-6) clearly addresses how use of DNL and SEL differ and how they are to be used:

> *"However, individuals do not "hear" DNL. The DNL contours are **intended for land use planning, not to describe what someone hears when a single event occurs**. Individual or single noise events are described in terms of the Sound Exposure Level (SEL) in units of dB* [decibels]. *SEL takes into account the amplitude of a sound and the length of time during which each noise event occurs. It thus provides a direct comparison of the **relative intrusiveness** among single noise events of different intensities and durations of aircraft overflights.* (emphasis added)

This information is assembled to help develop rational and defensible arguments that support the above framework.

2. JGL Study 2013

Absent Navy willingness to conduct on site noise evaluation, COER commissioned an independent noise study in 2013 to obtain actual on-site Growler noise data at OLFC (presented

[1] AICUZ Study Update for Naval Air Station Whidbey Island's Ault Field and Outlying Landing Field Coupeville, Washington. Final Submission. March 2005. (This study was produced by The Onyx Group of Alexandria, VA and San Diego, CA, under the direction of the NAVFAC Southwest)

in full in Appendix A), rather than simply accept the computer-modeled data used by Wyle Labs. COER believed on-site validation was critical.

The day-night noise level (DNL) estimates in JGL 2013 Table 4 were based on an average of all 365 days and various assumptions, none of which seem to fit very well at this time, given current understanding that night flights will be less, path 32 is to be used nearly exclusively (not 50:50 for paths 32 and 14), and that the averaging method used should perhaps reflect busy days only instead of an average over all 365 days in the year (i.e., busy + non-busy days). We therefore had Mr. Lilly redo the old table for both averaging methods and to reflect more realistic use of paths, night practice levels, and three different operations levels (3060, 5000, and 17,000); the revised update of that table is shown below as Table 2.1.

Of the 72 resulting DNL estimates in Table 2.1, the lowest 10 estimates, appropriately rounded, ranged from 70 to 74 dBA. All of the 66 others were 75 to 94 dBA. These on-site noise levels, all directly under path 32, are not reflected by the modeled (NOISEMAP) DNL contours developed by Wyle 2012[2], which are about 5 dB lower than the JGL on-site DNLs. This makes the modeled analysis suspect.

In fact, modeled data can and perhaps often does fail to reflect actual on-site measurements. A study[3] of 36 sites around Raleigh–Durham airport found the modeled data consistently underestimated the actual on-site noise by 5-15 decibels; that is, the actual noise levels were about 50% to 150% louder than the NOISEMAP (1991–1998) and INM (1999–2002) models had indicated.

From that study and because the NOISEMAP-modeled data in the 2005 AICUZ is lower than the JGL data, it follows that the actual numbers of noise-exposed individuals in Noise Zones 2 and 3 are well above the AICUZ-estimated numbers (see AICUZ Table 4-4).

The 2005 AICUZ recommends (Table 6-2) no housing development in Noise Zones 2 (DNL = 65–74 dB or 3 (64–85+ dB). That recommendation, however, has been impossible for Island County to apply because of pre-existing development and current development needs. So, instead of denying development, Island County has addressed the problem with special warnings. For example, the Public Health Department, for a short plat subdivision (permit SHP #343/02) in Admirals Cove required the following statement appear on the final mylar:

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[2] Wyle, 2012. Aircraft Noise Study for Naval Air Station Whidbey Island and Outlying Landing Field Coupeville, Washington. Wyle Report WR 10-22, Contract Number N62470-10-D-3003, Job No. T57711.01, October 2012

[3] Technical Report on Preparation of Day-Night Sound Level (DNL) Contours of Aircraft Noise During 2003 Raleigh-Durham International Airport North Carolina. March 2005. HMMH Report 295097.001 . Harris Harris Miller & Hanson, Inc., 15 New England Executive Park, Burlington, MA 01803
http://198.1.119.239/~flyrduco/rduaircraftnoise/noiseinfo/downloads/RDU_2003_DNL.pdf

"This short subdivision lies within AICUZ Noise Zone 2 meaning that noise levels of up to 115 decibels may be reached and the severity is such that individuals may experience adverse health effects."

This particular subdivision is directly under the approach in Admirals Cove, where the jets are about 400–500 feet overhead. At least the county is recognizing the "adverse health impacts."

Table 2.1. Estimates of annual DNLs, by position, based on JGL May 7, 2013, noise data and various assumptions (% night & number of overflights) and averaging method (50 busy days only vs. 365). Note that the annual average is always 8.6 dB lower than the daily average because 10 log (50/365) = 8.6 dB.

Percent Night	Pos. 1	Pos. 2	Pos. 3	Pos. 4
Assumptions: 3060 overflights at each position Annual DNL based on 50 days of flight activity averaged over just those 50 days				
5%	83.2	78.3	78.6	83.3
10%	84.4	79.5	79.8	84.5
25%	86.7	81.8	82.1	86.8
Assumptions: 3060 overflights at each position Annual DNL based on 50 days of flight activity averaged over all 365 days				
5%	74.6	69.7	70.0	74.7
10%	75.8	70.9	71.2	75.9
25%	78.1	73.2	73.5	78.2
Assumptions: 5000 overflights at each position Annual DNL based on 50 days of flight activity averaged over just those 50 days				
5%	85.4	80.5	80.8	85.5
10%	86.5	81.6	81.9	86.6
25%	88.9	84.0	84.3	89.0
Assumptions: 5000 overflights at each position Annual DNL based on 50 days of flight activity averaged over all 365 days				
5%	76.7	71.8	72.1	76.8
10%	77.9	73.0	73.3	78.0
25%	80.2	75.3	75.6	80.3
Assumptions: 17,000 overflights at each position Annual DNL based on 50 days of flight activity averaged over all 50 days				
5%	90.7	85.8	86.1	90.8
10%	91.8	86.9	87.2	91.9
25%	94.2	89.3	89.6	94.3
Assumptions: 17,000 overflights at each position Annual DNL based on 50 days of flight activity averaged over all 365 days				
5%	82.0	77.1	77.4	82.1
10%	83.2	78.3	78.6	83.3
25%	85.5	80.6	80.9	85.6

3. JGL Study 2016

To address the possibility that the May 2013 JGL noise sampling was an outlier, atypical of routine FCLPs at OLFC, we again commissioned a second set of noise samples in February 2016 with repeat sampling at the two of the same sites and two additional sites not sampled in 2013. The JGL study is available in full at the COER website. Samples at the 2016 repeated sites produced strong concurrence with the 2013 measurements, while the two new sites showed that noise was extremely consistent all across the full approach path above Admirals Cove where jets are about 300 to 500 feet above ground level. The consistency (i.e., low standard deviation) between the two independent sampling periods show that the measurements were reliable and valid:

> The primary purpose for this study was to determine if there is any significant difference in the measured noise levels when compared with the data collected in 2013. ...The fact that the measured change from 2013 to 2016 is less than half of the standard deviation of the maximum noise level within a single session suggests that the difference is insignificant. <JGL Acoustics, 2016>

It is also also noteworthy that the JGL sound exposure levels (SELs) at position 1 and 6, which are under the path 32 approach over Admirals Cove) are very similar to the approach sound exposure levels (SELs) for Growlers stated in the 2005 AICUZ.

Table 3.1. Growler sound exposure level (SEL) on approach and departure as specified in 2005 AICUZ compared with SELs measured at on-site approach and departure positions recorded in JGL 2013 and 2016.

Source	Approach (dBA)	Departure (dBA)
AICUZ 2005: SELs at 1000 ft.	117	114
JGL 2013 & 2016: SELs at Position 1 (~300 ft AGL)	111–113	Not applicable
JGL 2016: SELs at Position 6 (outside, ~300 ft AGL)	115	Not applicable
JGL 2013 & 2016: SELs at Position 4 (~300 ft AGL)	Not applicable	112–113

The differences between AICUZ and JGL are most related to the fact that the JGL ground positions were probably related to differences in ground-distance differences between the jet and the sound meters. That is, the JGL positions were displaced at further ground distances from the

jets than the AICUZ points of recording. Nevertheless, the SELs are quite similar, giving credibility to the JGL data.

In that statement, "*what someone hears*" is a term for "*what someone experiences*" because hearing produces an intertwined psychological and physiological reaction to sound, and that biological reaction includes reactions to the sound vibrations that penetrate into the entire body. So, to evaluate the biological complement of noise effects on health, both Wyle and the Navy admit that single noise event metrics, like sound exposure levels (SELs), not DNLs, are the appropriate metrics of ubiquitous use in medical research.

Additions to JGL Studies???

4. Hearing Conservation Zones

Understanding the problems with jet noise well, the Navy has adopted a Hearing Conservation Program (HCP). If Admirals Cove and other most other areas under the OLFC racetrack were a Navy installation, the area would be designated as a "hearing conservation zone," and everyone living there would be identified as "at risk" and placed in the HCP[4].

A hearing conservation zone represents a "hazardous noise area" defined as an area where the 8-hour time-weighted average exceeds 84 dBA (or 140 dB peak sound pressure level, SPL, for impact or impulse noise) for more than 2 days in any month. Military and civilian personnel working in such area are put in the Navy's Hearing Conservation Program and are identified as "at risk." The program requires frequent hearing tests and health monitoring, and according to section C1.3.2 of the program, when a permanent threshold shift—i.e., hearing loss—is identified the commanding officer must act to prevent further hearing loss.

Paul Schomer (Standards Director, Emeritus, Acoustical Society of America, Schomer and Associates, Inc.) compiled Table 4.1 from the JGL 2013 study, converting it to 8-hour time weighted average (TWA) doses for each outdoor JGL position and session of flyovers (method explained in Appendix A). That table further examines how exposure time (i.e., dose

[4] Navy and Marine Corps Public Health Center Technical Manual NMCPHC – TM 6260.51.99-2. Navy Medical Department Hearing Conservation Program Procedures. Navy and Marine Corps Public Health Center, September 15, 2008. http://www.public.navy.mil/surfor/Documents/6260_51_99_2_NMCPHC_TM.pdf

experienced by someone at that station for the full session) compares with the Navy-defined "hazardous noise zone" threshold requiring designation of a "hearing conservation zone."

For example, anyone at position 1 (Admirals Cove), in just two FCLP sessions of 35 overflights/session would accrue a noise dose equal to 115% of the Navy's permitted 8-hour allowable or threshold dose (as defined above). The 15% exceedance, under Navy requirements, would constitute a hazardous risk and make that area a Hearing Conservation Zone. Growlers practices at OLFC, however, often exceed one or two sessions in a single day, and much more in many months. For example on 14 days in July 2012 there were 1122 overflights of position 1, or 80 overflights per 24 hour period of flying activity. Given that 70 overflights exceeded the Navy threshold by 15% for on 8-hour day in on 2 days in any given month, it is obvious the 1122 overflights at 80/day for 14 days exceeded the threshold by more than 7 times.

The Navy's 2005 AICUZ indicates there will be 6120 annual operations (equals 3060 overflights. That would mean, on average, there are to be 255 overflights per month, and 255 overflights would be about 7.3 times (255/35) the exposure recorded by JGL for position 1, or 423% of the Navy's threshold for designating a hazardous noise zone. The other positions are all likewise well above the Navy threshold.

Table 4.2 shows the related results when the same outdoor 2013 JGL converted to approximate indoor noise levels. While the indoor levels do not cross the hearing conservation zone threshold, Schomer's analysis assumed a 15 dBA decrease from the JGL outdoor readings. That may be realistic for winter when all doors and windows are shut, but in the summer, with windows and doors open, the reduction may be far less. It should be further understood that during numerous sessions, folks will be outdoors frequently and, hence, exposed to a mix of outdoor and indoor levels. In other cases, there is no indoors option. For example, position 1 is close to an outdoor swimming pool used by Admirals Cove residents and another public pool is near position 6. Positions 2 and 3 are in agricultural fields, and position 4 is a youth athletic field where families gather for extended periods.

Table 4.1. Analysis of JGL 2013 data converted to 8-hour time weighted averages (TWA), showing time of exposure to noise levels 85 dBA to >115dBA at the four JGL outdoor by recording positions (stations) and how each exposure amount (or dose) relates to the Navy-defined hazardous noise zone (i.e., designation of a hearing conservation zone). The lower table shows the related results when the same outdoor JGL data are reduced by 15 dBA to presumably represent indoor noise levels.

Total time over (s)	Cummulative time in seconds by position (1-4)				Navy full dose time exceeded		Actual percent of full Navy dose exposure by position			
	1	2	3	4	Seconds	Minutes	1	2	3	4
85 dBA	448	855	365	600	28,800	480	0.2	1.1	0.4	0.4
88 dBA	381	538	257	482	14,400	240	0.5	1.7	0.6	0.7
91 dBA	315	299	169	375	7200	120	0.8	2.0	1.0	1.5
94 dBA	254	152	97	267	3600	60	1.9	1.6	0.9	2.0
97 dBA	184	93	63	195	1800	30	3.1	2.4	1.3	3.3
100 dBA	128	50	39	135	900	15	5.6	2.4	2.0	6.6
103 dBA	78	28	21	76	450	7.5	9.1	3.6	3.3	8.9
106 dBA	37	12	6	36	225	3.75	7.1	3.1	1.3	10.2
109 dBA	21	5	3	13	112.5	1.875	11.6	4.4	1.8	10.7
112 dBA	8	0	1	1	56.25	.9375	10.7	0.0	1.8	1.8
115 dBA	2	0	0	0	28.125	0.46875	7.1	0.0	0.0	0.0
Percent of Navy permitted daily noise exposure for one flying session							58	22	14	46
Percent of Navy permitted daily noise exposure for two sessions (×2)							115	45	29	92
Number of flyovers at each position as recorded for that session and position							35	43	26	28
Percent of Navy permitted daily noise exposure dose per flyover							1.66	0.52	0.54	1.64
Percent of Navy permitted daily noise exposure dose for average of 255 overflights/month (i.e., 6120 operations/year)							423	133	138	418

Table 4.2. Analysis of JGL 2013 data converted to 8-hour time weighted averages (TWA), showing time of exposure to noise levels 85 dBA to >115dBA at the four JGL outdoor by recording positions (stations) and how each exposure amount (or dose) relates to the Navy-defined hazardous noise zone (i.e., designation of a hearing conservation zone). The lower table shows the related results when the same outdoor JGL data are reduced by 15 dBA to presumably represent indoor noise levels.

Total time over (s)	Cummulative time in seconds by position (1-4)				Navy full dose time exceeded		Actual percent of full Navy dose exposure by position			
	1	2	3	4	Seconds	Minutes	1	2	3	4
85 dBA	128	50	39	135	28,800	480	0.2	0.1	0.1	0.2
88 dBA	78	28	21	76	14,400	240	0.3	0.1	0.1	0.3
91 dBA	37	12	6	36	7200	120	0.2	0.1	0.0	0.3
94 dBA	21	5	3	13	3600	60	0.4	0.1	0.1	0.3
97 dBA	8	0	1	1	1800	30	0.3	0.0	0.1	0.1
100 dBA	2	0	0	0	900	15	0.2	0.0	0.0	0.0
103 dBA	0	0	0	0	450	7.5	0.0	0.0	0.0	0.0
106 dBA	0	0	0	0	225	3.75	0.0	0.0	0.0	0.0
109 dBA	0	0	0	0	112.5	1.875	0.0	0.0	0.0	0.0
112 dBA	0	0	0	0	56.25	.9375	0.0	0.0	0.0	0.0
115 dBA	0	0	0	0	28.125	0.46875	0.0	0.0	0.0	0.0
Percent of Navy permitted daily noise exposure for one flying session							2	0	0	1
Percent of Navypermitted daily noise exposure for two sessions (×2)							3	1	1	2
Number of flyovers at each position as recorded for that session and position							35	43	26	28
Percent of Navy permitted daily noise exposure dose per flyover							.057	.012	.019	.036
Percent of Navy permitted daily noise exposure dose for average of 255 overflights/month (i.e., 6120 operations/year)							14.5	3.06	4.85	9.18

5. ISO 1996-1 Standard

<This will be added when Sandy has it from Geneva. Now have and in process of adding>

6. Other Noise Exposure Thresholds

The National Institute for Occupational Safety and Health (NIOSH) has determined that above a critical sound intensity, the mechanism of hearing damage changes from one based on cumulative noise exposure (the combination of magnitude and duration of sound) to a mechanism based on sound intensity alone, regardless of duration[5]. NIOSH estimates 115 to 120 dBA as the critical noise level at which human hearing is subject to instantaneous permanent damage effects. Without adequate hearing protection, any exposure to noise levels above 115 dBA is likely to cause some degree of permanent hearing threshold shift.

The period required for recovery from temporary threshold shift effects can range from minutes to several hours, depending on the intensity and duration of the noise exposure that produced the threshold shift. Even when recovery from temporary threshold shifts routinely occurs, permanent loss of hearing sensitivity still can occur as a result of long term cumulative noise exposure[6]. Permanent loss of hearing sensitivity (a permanent increase in the hearing threshold at one or more frequency bands) occurs in two ways:

- as a progressive, long-term result of cumulative noise exposure; and
- as an immediate result of exposure to high noise levels, regardless of exposure duration.

The U.S. Environmental Protection Agency (EPA) identified an annual average 24-hour Leq[7] (see below) of 70 dBA as a long-term noise exposure limit that should protect the general public against hearing damage with an adequate margin of safety (EPA 1974, 28-32). Noise levels obviously vary during the course of a day, but a 24-hour Leq of 70 dBA implies that there would not be any extended periods of exposure to high noise levels. To put a 24-hour Leq of 70 dBA in

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[5] National Institute for Occupational Safety and Health. 1998. Criteria for a Recommended Standard: Occupational Noise Exposure. Revised Criteria 1998. NIOSH Publication 98-126. PB98-173735. Cincinnati, OH. www.cdc.gov/niosh/critdoc2.html.

[6] http://www.garrison.hawaii.army.mil/sbcteis/feis/Appendices/Appendix%20H1.pdf APPENDIX H-1 NOISE BACKGROUND INFORMATION (pages 13 & 14)

[7] *Equivalent Average Sound Pressure Level (or Energy-Averaged Sound Level).* The decibel level of a constant noise source that would have the same total acoustical energy over the same time interval as the actual time-varying noise condition being measured or estimated. Leq values must be associated with an explicit or implicit averaging time in order to have practical meaning.

perspective, each of the following noise exposure conditions would generate a 24-hour Leq of 70 dBA or more:

• an 8-hour work day with an average noise exposure of 74.8 dBA (for example: 21 minutes at 85 dBA, 30 minutes at 80 dBA, 30 minutes at 75 dBA, and 6 hours 39 minutes at 70 dBA) and 16 hours at any noise level below 70 dBA;

• 2 hours 25 minutes at 80 dBA and 21 hours 35 minutes at any noise level below 70 dBA;

• 46 minutes at 85 dBA and 23 hours 14 minutes at any noise level below 70 dBA;

• 15 minutes at 90 dBA and 23 hours 45 minutes at any noise level below 70 dBA;

• 5 minutes at 95 dBA and 23 hours 55 minutes at any noise level below 70 dBA; or

• 1.5 minutes at 100 dBA and 23 hours 58.5 minutes at any noise level below 70 dBA.

7. Busy-Day vs. All-Days DNL

For any given criterion addressing the annoyance or other effects of a given DNL (e.g., 75 dB) on people, Jerry Lilly (JGL) points out, that the criterion is likely to be based on airports with daily air traffic: "I don't believe that there is a separate DNL criterion for busy days, but the other side could suggest that there should be one. It is to your advantage to assume that the busy day criterion should be the same as the annual average criterion."

That may be, but to be sure we have the nuance correctly understood, we need to fully understand the difference between an annual busy-day-only average DNL versus an average based on all 365 days in the year. Assuming:

1. An average annual busy-day DNL it is calculated by summing (in some fashion) all the busy day DNLs as total Y (which includes night weighting) and dividing by the number of busy days, let's say 50. Let the resulting DNL be D, and let's say $D = 77$ dB.
2. If the Navy divides Y by 365 rather than 50 days, then the annual average would be far less than D; let it be d, and let's say $d = 65$ dB.
3. And assuming d at 65 dB is below some DNL criterion, say 75 dB, then the Navy would be able to say it will fly every day of the year and still create no problems because each day on average is 65. (Note: this is correct only if the number of operations and the night percentage does not change in the process of flying every day, in other words they spread the operations out over 365 days.)

If the Navy is calculating d, not D, then it seems the Navy would be deflating the DNL contours to achieve a no-impact result, which would seem to our advantage to point out and to ask for a do-over.

Should be part of project NEPA

Relates to Growler part of Growler expansion

NAVY PLANS

ELECTRONIC WARFARE RANGE

OVER

OLYMPIC NATIONAL PARK
OLYMPIC NATIONAL FOREST & DNR LAND
WESTERN CLALLAM AND JEFFERSON COUNTIES PRIVATE LAND

WHAT'S UP:

1. Periodic unannounced closures of portions of Olympic National Forest for war games, testing and training.
2. No public notices were published in any media that directly serve the northern and western Olympic Peninsula. In the absence of public comment, the Navy issued a "Finding of No Significant Impact."
3. Up to 118 supersonic Growler jets (36 are new) to fly directly over north and west Olympic Peninsula communities and cities for 260 days per year, on 2,900 training exercises for 8-16 hours per day.
4. Growlers are louder than any other Navy jet and can produce 150 decibels, enough to cause instantaneous hearing loss. Navy statistics for older jets say they produce 113 decibels at an altitude of 1000 feet, which is well above the 85 decibel threshold for permanent hearing loss. Growlers are authorized to fly at 1200 feet above the ground in some areas of the Olympic Peninsula. When they fly in trios, local noise levels could triple.
5. Ground-based equipment using 15 locations in the Olympic National Forest will emit enough electromagnetic radiation to melt eye tissue after brief exposure. Growler jet electronic weaponry is far more powerful.
6. Neither DNR nor Olympic National Park were consulted in the early stages of the Navy's Environmental Assessment. The Navy has not applied for a permit to use DNR lands.
7. The use of electronic attack weaponry was never discussed in the Navy's Environmental Assessment.
8. A National Park Service report issued in July 2014 showed that in 2013, 3,085,340 visitors to Olympic National Park spent $245,894,100 in communities near the park. That spending supported 2,993 jobs in the local area. A clean and quiet environment has been linked to this economic success.

WHAT'S WRONG:

1. Growler jets have the capacity to jam all electronic signals, including cellphones, navigational equipment, radio stations and 911 and fire-rescue communications, and they carry electronic attack weapons that include lasers, high-powered microwave, EMP and anti-radiation devices that use concentrated, directed beams of energy designed to kill or disable personnel and facilities.
2. A Navy supporting document says, "Friendly Electronic Attack could potentially deny essential services to a local population that, in turn, could result in loss of life and/or political ramifications."
3. Each jet burns 1304 gallons per hour and produces 12.5 metric tons of CO2 per hour. This is 23% more than the annual CO2 emissions of a Washington State citizen.
4. Destruction of neither the "wilderness soundscape" over Olympic National Park nor property values in areas subject to jet noise are discussed in any official documents.
5. The Forest Service has admitted publicly that they have done no independent scientific investigation to verify the Navy's claims.
6. Aircraft aerial maneuvers and their resulting horrific noise on the western half of the Olympic Peninsula will have an overwhelming impact on people living in or visiting the area.
7. In both wildlife and humans, effects from loud noise include hearing loss, increased stress hormones, cardiovascular disease, immune system compromise and behavioral/psychosocial impacts.
8. One billion birds fly up and down the Pacific Coast Flyway each year. The effects of loud noise and electromagnetic radiation on their ability to find resting places and to navigate has not been analyzed by the Navy or the Forest Service.

WHAT YOU CAN DO:

START BY LEARNING MORE! Go to PROTECT OLYMPIC PENINSULA at http://www.facebook.com/protectolypen
Ask yourself if you would rather hike in OLYMPIC NATIONAL PARK or in the PACIFIC NORTHWEST ELECTRONIC WARFARE RANGE. Ask yourself whether anybody would purchase your house if it were situated in an ELECTRONIC WARFARE RANGE?
TELL YOUR FRIENDS! SHARE YOUR CONCERNS ON SOCIAL MEDIA!
CALL YOUR POLITICAL REPRESENTATIVES!

DON'T LIKE IT? GET INVOLVED! MAKE YOUR VOICE HEARD!
PROTECT OLYMPIC PENINSULA!

Navy Accident Risk Assessment – Missing in Action

From the DEIS, page 4-261: "... While it is generally difficult to project future safety/mishap rates for any aircraft, the Growler has a well-documented and established safety record as a reliable aircraft."

This quote is the extent of effort expended on an accident risk analysis that must accompany every credible EIS. A manual on EIS preparation says an EIS must include treating a "maximum foreseeable" (different from worst-case) accident, its probability of happening, its potential adverse consequences and its remediation. The magnitude of a risk must be calculated from its probability and tis consequences; comparisons of risks for each alternative should be done.*
Stating "reliable aircraft" and "well-documented safety record" in the DEIS in no way acknowledges the very real potential for a catastrophic flight incident at OLF. The writers somehow found it convenient to withhold important statistics (like the 38 crashes since 2000 of the EA-18G and its cousin FA aircraft) from the DEIS. Several aggravating factors at OLF are conducive to these kinds of accidents, thus endangering the populace, the environment, local properties and indeed, the airmen themselves. The EIS accident risk analysis for all four action alternatives certainly must include factors such as facility shortfalls, unique Whidbey atmospheric challenges, scheduling compromises, contributors to pilot error, and must include a Growler problem itself, one of the most pernicious, the hypoxia problems that continue to haunt the Growler. Furthermore all EISs must include the potential harms and disruptions resulting from use of OLF and from accidents of various levels of complexity and intensity. Omitting such an analysis fosters a tone of unrealistic optimism, even prompting the proposal to multiply flight operations sixfold while still pronouncing "no significant impact." In fact, dramatically amplifying flight operations will severely escalate the likelihood of a significant life- and property-destroying "impact."

*energy.gov reference manual on preparing environmental impact statements for NEPA

This response will consider in detail the following EIS-omitted factors that are amplifiers of, and results of, accident risk:

Compromises on facilities:

- 35% shorter than regulation Growler runway-length
- 1/40 of the required open acreage surrounding the runway-length
- residences, fuel depot, businesses, county facilities, a highway and a city are within accident-risk areas near runways and many are within short distances of their ends.

Atmospheric conditions:

- Frequent wind shifts, creating dangerous tail-winds for allowed T & G's, some witnessed so far as even exceeding strict wind-speed regulations
- Common presence of birds that endanger engines
- Frequent fog, rain events, and wind that can force "edgy" calls on permitted flights.
- A six-fold increase on demand for precious flight times (half the days of the year are needed); this is very likely to result in further tightening the line between "flight go" and "flight abort" calls, leading to decreasing the safety envelope.
- A vast "*density altitude*" difference between OLF (d.a. 337) and typical Middle East sortie locations (Persian Gulf d.a.2182). While not endangering pilots in training it endangers them in a war theater: increases their risk of hitting a Persian Gulf carrier deck too hard or not soon enough by misjudging the lift of the air.

Pilots and planes: circumstances contributing to risk:

- Night flights with tired pilots (tiredness welcomed for realistic practice)

- The troubling rise in the number of breathing and pressurization problems in FA-18G and Hornets; the pilots rate the Growler's tendency toward hypoxia their most pressing problem.
- Pilots are trainees learning new, dangerous maneuvers, automatically increasing accident risk above routine flights done by seasoned pilots.
- The Growlers are part of a family of similar planes that have a significant accident rate: 38 crashes (and numerous incidents of dropping pieces from flight) since 2000.

Effects of catastrophic accidents on the Whidbey Island Community

- Dispersal into the water table of fire-fighting Type B foam with health-endangering, banned, toxic ingredients. Training and accidents have already injected these into the Whidbey water table, rendering some vital citizen wells unusable, while endangering the Coupeville water supply. These banned toxins are still being stored on Whidbey for emergency use.
- Economic, health and infrastructure damage from catastrophic accident scenarios.

Conclusions and Implications of all the risky conditions at the OLF: the Navy, while still showing considerable insensitivity to citizen complaints, finds itself adjusting flights, limiting schedules, and handling constant complaints, all because it is training on a small footprint passed down through decades of use but now in a highly-populated region. It is already a huge, noisy, toxic, dangerous foot trying to fit into a small shoe; that foot is about to grow six times larger making the headaches of scheduling, logistics, administration and angry public interface six times (or more) larger as well. On top of this there looms the perpetual "sword of Damocles" hanging over the administration's head: a catastrophic deadly accident that could, besides creating real health, economic and environmental damage, shatter the public's diminishing patience and faith in Navy ops resulting in hostility toward enduring any more operations at OLF and indeed perhaps at Ault Field whose operations are challenging for Oak Harbor and neighboring San Juan Islands' residents.

The EIS must face and honestly evaluate accident risk, not leave it out or pronounce it negligible. This is either a head-in-the-sand or a coverup approach. The elevated risk is not just to citizens and their property, not just to airmen, but to the Navy's whole training operation as well. The large accident risk, caused by the perilous, inappropriately cramped operation of training flights, threatens the island and the Navy with the prospect of a sudden catastrophic event that enrages the public and forces the Navy to rapidly find an alternate practice location. (They have not had the will to thoroughly vet several feasible off-Whidbey possibilities right now, some used already for overflow T & G scheduling beyond the current 6100 flight operations currently allowed.

The time is right now, preemptively treating this need seriously, and beginning a transition of anticipated increased Growler training to an alternate facility. It would relieve tense community relations and restore faith in the Navy as a "good neighbor" while reducing considerable catastrophic risk associated with the additional flight ops. Ultimately all FCLPs could be moved from OLF, further reducing the accident risk, and as a relief of long-suffering Coupeville area residents. A very posigive by-product for the Navy, besides improved public relations and reduced catastrophic risk, would be

easier planning and administration of the estimated 175 days of needed flight times for the 35-36 Growler option, with far more predictable atmospheric conditions occurring (and with density altitude ratings far more akin to those flown in typical battle zones).

Further information and discussion of all the accident-risk factors outlined above:

Compromises on facilities:

- 35% shorter than regulation runway. Navy regulations specify that ..(blah) (blah)

West Coast Action Alliance comments for Governor Inslee's staff:
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Thank you for meeting with us.

According to the Navy, "The [Growler] EIS evaluates the potential direct, indirect, and cumulative environmental impacts of the Proposed Action under three action alternatives." Unfortunately, not all direct, indirect and cumulative impacts are being dealt with in this EIS; for example, jet noise is directly impacting communities, Tribes and wildlands well outside the immediate environs of Naval Air Station Whidbey Island (NASWI); yet the only area the EIS analyzes is what falls within 10 miles of NASWI. We brought this concern up in our scoping comments in 2014.

Computer modeling for the 10-mile radius of "Affected Noise Environment" around Naval Air Station Whidbey Island (NASWI) extends to the year 2021 and clearly demonstrates the Navy's ability to model noise, yet no modeling was done for highly impacted areas such as the West End of the Olympic Peninsula, with its very different terrain and weather conditions. These communities may not hear takeoffs and landings, but they are severely affected by Navy flight operations. As a result of leaving out vast areas where noise impacts will occur (and are occurring now), the EIS eliminates far too many direct, indirect and cumulative effects to be considered a valid analysis. Limiting the scope like this amounts to a segmentation of impacts that precludes the public's ability to gain legal standing via comments on the official record. By law, the public has the right to address the full scope of impacts, not just a narrow sliver of them.

The Navy said it evaluated noise for the Olympic Peninsula in 2010 with the Northwest Training Range Complex EIS, but that document did not do so. Had the activities contemplated by the proposed Electronic Warfare Range been evaluated by that EIS, the ground-based mobile emitters should have been listed as an emission source. They were not. For Electronic Combat and Electronic Attack, the only areas listed by activity and training area, warfare type, and Range and Training Site were the Darrington Area and W-237. Had noise been properly evaluated, the Olympic MOAs should have been listed. They were not. Therefore, noise has not been evaluated for the Olympic Peninsula. Nor has the Navy made any actual noise measurements in affected communities. In addition, the NOISEMAP software used for computer modeling is outdated, and a report from a DOD commission concluded that noise measurements using this software could be legally indefensible.

In still another example of the flaws in this EIS, the contamination of drinking water in residential and commercial areas near the NASWI runways, due to use of hazardous chemicals, is not addressed. The EIS concludes, "No significant impacts related to hazardous waste and materials would occur due to construction activities or from the addition and operation of additional Growler aircraft." But these

chemicals have never been analyzed and have been used in conjunction with Growler training and operations for many years; therefore their analysis should not be excluded. With flights at OLF Coupeville increasing from 3,200 in 2010 to as many as 35,500, nobody can claim that a 1,000 percent increase in 7 years for which no groundwater or soil contaminant analyses have been done is not significant.

It is clear that at the November 10 publication of this EIS, the Navy was well aware of potential problems with contamination of residential drinking water due to what it calls "historic" use of fire suppressants for flight operations. In May 2016 the USEPA issued drinking water health advisories for two PFCs, and the Navy announced in June that it was in the process of "identifying and for removal and destruction all legacy perfluorooctane sulfonate (and PFOA) containing AFFF [aqueous film forming foam]." Yet on page 3-62, the EIS dismisses concerns with a statement about actions that took place nearly 20 years ago: "Remediation construction was completed in September 1997, human exposure and contaminated groundwater exposures are under control, and the OUs at Ault Field and the Seaplane Base are ready for anticipated use (USEPA, 2016e)." The statement is ludicrously outdated, and recent events refute it. Three days before the EIS was published, on November 7, 2016, the Navy sent a letter to more than 100 private and public drinking water well owners expressing concern that perfluoroalkyl substances (PFAS) found beneath the OLF had spread beyond Navy property. Yet the word "perfluoroalkyl" or "PFAS" is not mentioned once in the entire 1600-page Growler EIS, nor the 2005 or 2012 EAs.

A statement in a recent news interview by Public Affairs Officer Mike Welding sought to reassure the public: "The Navy is going to provide those people with safe drinking water until we can figure out how to remove the contaminant from the water well, filter it out or something like that. It's something that still needs to be worked out."

Unfortunately, a statement from the Department of Defense's own "MERIT" program contradicts the Navy's diagnosis: "Currently, there are no in situ technologies and very limited ex situ options to treat soil or groundwater contaminated with PFCs." The question of who will pay for these homes to be hooked up to public eater supplies is not addressed in the EIS.

The EIS confines its discussion of groundwater contamination to soil compression and compaction effects from new construction, and concludes there will be no impacts to groundwater. No mention of contaminated soil is found in the EIS. Extensive evaluations for a variety of hazardous materials, however, were included in the Northwest Training and Testing EIS, so why leave it out of the Growler EIS? This is the equivalent of a doctor refusing to look at an EKG that clearly shows a heart attack, and diagnosing the patient with anxiety. The Navy needs to do a Supplemental EIS addressing these deficiencies, and it needs to allow public comment on this contamination, by extending the current comment period for at least another 90 days.

Fact Sheets

Growler Expansion Effects at OLF Coupeville

By Coupeville Community Allies

Impacts to Coupeville Community by Proposed Navy Action

The preferred plan:

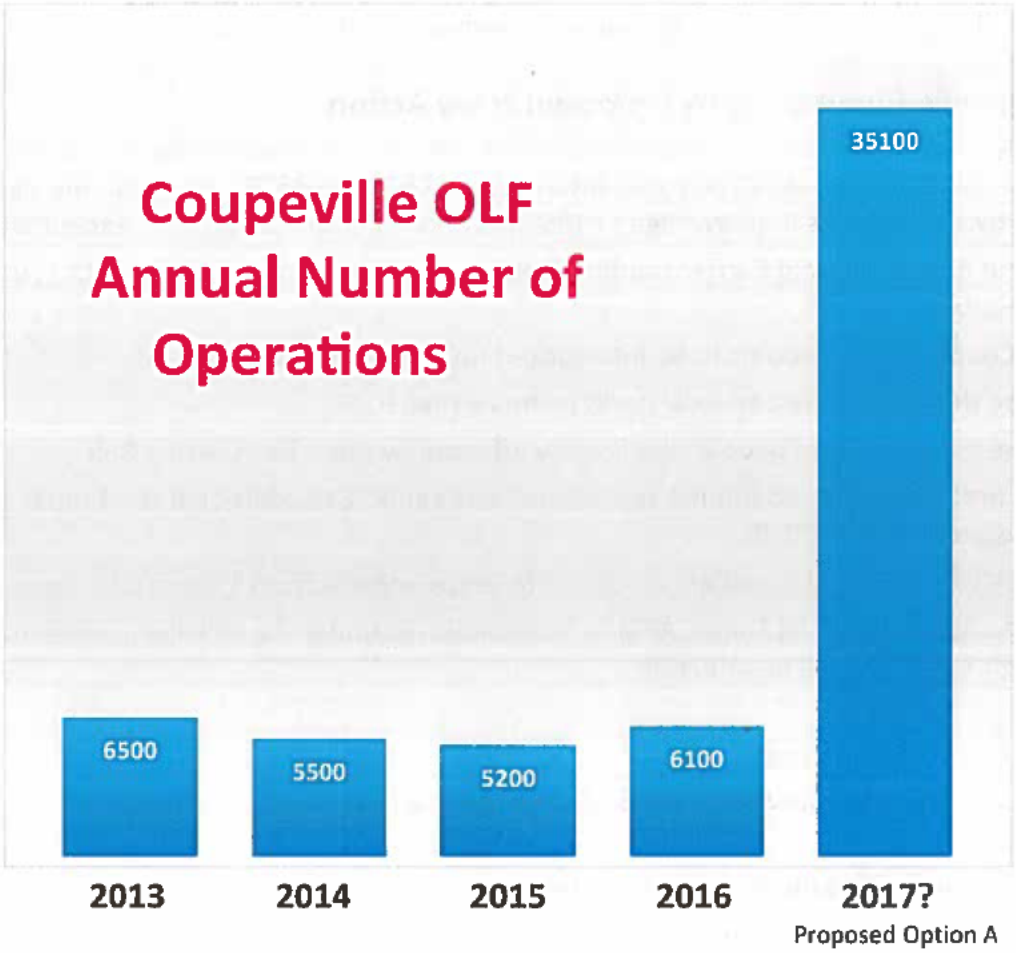
- Will increase flight operations from a current average of 6100 to 35,100 per year, increasing current operations by six-fold. This is an average of 135 operations per day, every day, except weekends.
- Specifies that 80% of all Field Carrier Landing Practice (FLCP) be conducted at the OLF, vs. 20% at Ault Field (Oak Harbor)
- Will cause Coupeville classrooms to be interrupted up to 5 times per hour.
- Will increase the noise impact to local parks by more than 91%
- Will increase the number of people significantly affected by noise by 76% to 3,865
- Will affect more than 1183 additional agricultural acres and 2243 additional residential acres with average sound levels greater than 75 dB
- Will increase commercially zoned areas subject to noise impacts from 1 acre to 11 acres.
- Will cause Accident Potential Zones (APZ) to be established under the OLF flight patterns. Land use and property rights in APZ's will be affected.

EIS Points of Concern to Address

1. Alternatives to basing all Growlers at NASWI not evaluated.
2. National Environmental Policy Act (NEPA) requires an EIS to be less than 300 pages if "unusually complex". The draft EIS is more than 1500 pages.
3. Noise modeling is outdated, noise averaging inappropriate. Actual noise measurements were not made. Measurements made in by the NPS show noise levels far in excess of that predicted by the modeling.
4. Use of DNL noise averaging criteria not appropriate for military flight operations.
5. Jet noise reduction measures not thoroughly considered.
6. Crash frequency not addressed.
7. APZ not established now, as required & effect of establishing APZ not addressed.
8. Childhood learning disability & hearing damage not addressed sufficiently.
9. Impact on students at Coupeville Middle and High Schools not addressed.
10. Impact on children at play at Rhodedendron Park not addressed.
11. Economic impact on tourism, property value loss, decline of population, loss of businesses, not addressed adequately.
12. Impact to avian migration, habitat & wetland species near shorelines not addressed.
13. Effect on Ebey's Landing National Historical Reserve, including tourism, cultural landscape, soundscape, and natural resources not addressed.
14. Water quality degradation potential to sole-source aquifer not addressed.
15. Frequency and effects of fuel dumping not addressed.

To Learn More

- Follow us on Facebook at Coupeville Community Allies
- To receive email updates email us at coupevillecommunityallies@gmail.com.
- Review the Draft EIS and appendices at www.whidbeyeis.com



What Can You Do?

- Provide comments on the Draft EIS online at whidbeyeis.com. The deadline for comments is January 25th
- Call (best), email, or write your elected officials. You may call daily – number of calls are important. Email and postal addresses may be found at the Coupeville Community Allies (CCA) Facebook page.
  - Governor Jay Inslee: 360.902.4111; governor.wa.gov
  - U.S. Senator Patty Murray: 206.553.5545; www.murray.senate.gov
  - U.S. Senator Maria Cantwell: 425.303.0114; www.cantwell.senate.gov
  - U.S. Congressman Rick Larson: 800.652.1385; rick.larsen@mail.house.gov
  - Island County Commissioner, District 1, Helen Price-Johnson: 360.679.7354; district1@co.island.wa.us
  - State Representative, 10th District, Norma Smith: 360.786.7884; norma.smith@leg.wa.gov
  - State Senator, 10th District, Barbara Bailey: 360.786.7618; barbara.bailey.leg.wa.gov
- Sign the online petition to our elected officials. This is easiest to access from the CCA Facebook page. Or type http://bit.ly/2gZwR5Q into your browser.

Internal Draft Comments - Confidential not for public release -

EBLA Comments on Navy Growler EIS

From: Ray Zip, Ebey's Reserve, NPS

Introduction

Extreme noise from military overflights in the Reserve significantly impacts the soundscape, and presents significant mitigation challenges for the NPS because we have no direct authority over the Reserve airspace. To protect the public interest in preserving the soundscape, we rely on science, advocacy and cooperation with federal partners such as the Navy to help us achieve our mission. To that end we appreciate the opportunity to comment on the DEIS and look forward to working with the Navy to reduce impacts to the maximum extent possible.

Legal Context

Statements of concern same throughout.

- Congress established Ebey's Landing National Historical Reserve in 1978 to "preserve and protect a rural community which provides an unbroken historical record from nineteenth century exploration and settlement in Puget Sound to the present time..." (National Parks and Recreation Act, 1978, P.L. 95-625). The 17,400-acre Reserve commemorates a period of historic significance for Euro-American settlement of the Pacific Northwest that began with Captain George Vancouver's exploration of Puget Sound in 1792 and concluded at the end of W.W. II. The federal law that created the Reserve formally acknowledged the national historical significance of the area, and directed the Secretary of the Interior to cooperate with state and local officials to protect, preserve and interpret its national significance. This legislative mandate underscores the national significance of the Reserve, and underscores the importance of the NPS mission to safeguard and advocate for the resources and values the Reserve.
- The 17,400-acre Reserve is managed cooperatively by the NPS in coordination with Island County, the Town of Coupeville, and Washington State parks. The NPS owns 413 acres of land in fee, along with scenic easements covering several thousand acres of land. The enabling legislation for the Reserve directs the NPS to manage these lands in accordance with the NPS Organic Act of 1916, which includes a mandate to preserve, conserve and protect natural and cultural resources, and to provide for public enjoyment.

Noise Associated with Aircraft Operations

- Field Carrier Landing Practices (FCLPs) at the Outlying Field Coupeville (OLF Coupeville), generate the most extreme noise in the Reserve (NPS, 2016). Higher elevation overflights associated with operations at Ault Field also generate significant noise over the entire Reserve and the broader region.
- In 2006 the NPS prepared the first General Management Plan (GMP)/Environmental Impact Statement for the Reserve, which included a qualitative discussion of soundscape conditions and sources of noise pollution specifically including military overflights. The GMP discussed FCLP operations at OLF Coupeville as a baseline condition that causes significant impacts to the soundscape on a regular but inconsistent basis. The GMP was written prior to implementing the transition from EA-6 Prowlers to EA-18G Growlers, which are widely experienced as a louder and more intrusive aircraft. This DEIS proposes to substantially expand the number of Growlers stationed at NASWI, increase the number of FCLPs at OLF Coupeville, and expand the overall presence of Growlers in the regional airspace. These proposed actions are of concern to the

NPS because existing noise caused by military overflights are already causing significant adverse impacts on an intermittent basis, and these impacts would expand under all the alternatives under consideration.

- In summer 2015 the NPS conducted acoustic monitoring at the Reuble Farmstead and the Ferry House to quantify baseline acoustic conditions in accordance with NPS policies.[1] The acoustic report was finalized just prior to completion of the DEIS and shared with the Navy. The DEIS responded to the data as follows (Section 1.9.5):

> "The conditions measured by this study were actual aircraft noise overa 28-day period in June and July 2016. Although this differs from the affected environment modeled for calendar year 2021 in this EIS, the results of the study appear consistent with the Navy's previous noise analyses. Furthermore, the National Park Service's monitoring report demonstrates that, while military aircraft are loud, military aircraft operations are highly intermittent, with long periods of no military aircraft activity. For example, the report demonstrates that aircraft noise above 60 dB (normal conversation levels) occurred less than 1 percent of the time during the study period. "

We have compared the monitoring data to the DEIS and concluded there are substantive differences in noise magnitude (see following section). We also believe it is very important to clarify that the timeframe for monitoring was not coordinated with Navy overflight traning, although FCLPs did not take place during montoring. Therefore, the duration of noise above 60dB Lmax over the 31-day study period may not reflect typical noise exposure duration. Moreover, the magnitude and intensity of noise from Growlers should not be dismissed because overflights are intermittent and of relatively short duration.

- The following compares NPS monitoring data with Navy modeling data for similar locations (Points of Interest) in the Reserve. Note the differences in noise magnitude. These differences highlight the limits of modeling and the importance of field verification of models to ensure accuracy.

Point of Interest	Lmax dBA	SEL
Reuble Farmstead	113	117.2
Rhododendron Park	106	112
Difference	7	5.2
Ferry House	85	96.6
Ebey Prairie	77	88
Difference	8	8.6

Rhododendron Park is approximately 1km closer to the OLF than the Reuble Farmstead, and existing DNL maps depict the area as having a higher noise exposure that the Reuble Farmstead, so noise at that location should be higher compared to noise at the Reuble Farmstead. However, NPS monitoring results document a 7dBA difference in Lmax, and a 5.2 difference in SEL. The differences

[1] NPS DIRECTOR'S ORDER #47: SOUNDSCAPE PRESERVATION AND NOISE MANAGEMENT, provides for addressing the problem of excessive/ inappropriate levels of noise by directing park managers to measure baseline acoustic conditions.

between levels at the Ferry House and Ebey's Prairie are 8 dBA Lmax and 8.6 SEL. In both instances, the DEIS modeling data projected for Calendar Year 21 (full implementation of the proposed action) appear to significantly underrepresent the noise derived from NPS monitoring of current conditions.

[INTERNAL NOTE: the number of annual events metric provided in Table 3.2-4 in DEIS shows 267 events for an entire year, whereas just for one month our monitoring documented 281 aircraft events exceeding LAmax 70 dBA for Reuble Farmstead. I did not discuss this difference because they appear to be different numbers. What is very unclear is how there can be 267 annual events predicted for Rhododendron park when the baseline that should have generated that value is 6,120 FCLP operations at the OLF. The figures should be much higher because Rhododendron park is very close to the OLF.]

These differences suggest there are limitations to NOISEMAP modeling accuracy, and use of modeling results to draw substantive, quantitative conclusions about potential impacts to Reserve resources. It is also worth noting that previous Navy analyses using the NOISEMAP model indicated the Growler is relatively quieter (US Navy, 2012 [exec summary, p. ix]). If our results are accurate and the NOISEMAP model under predicts noise intensity, that may also help to explain why there is a widespread perception that Growlers are significantly louder than their Prowler predecessor in spite of model predictions to the contrary.

Impacts to cultural Resources

- The Cultural landscape within EBLA enables visitors and residents to experience patterns of Euro-American settlement that are still within their original farm, forest and marine settings. The cultural landscape includes historic settlement, development patterns and natural features that reflect human history and the unique northwest character of the area. Views and perceptual qualities, including the soundscape, contribute significantly to the authenticity of the cultural landscape, and enable one to imagine what it was like to be here hundreds if not thousands of years ago.
- The scope of the DEIS cultural resource analysis is limited to archeological site and historic structures and we generally concur with the DEIS findings regarding those resources. The DEIS, however, does not evaluate impacts to the cultural landscape, which is a resource that is fundamental to the integrity of the Reserve. The extreme noise and related effects of low and high elevation Growler aircraft overflights significantly impact the cultural landscape by intermittently degrading the authenticity of the area, including views, auditory and perceptual values of place. These impacts need to be considered and disclosed in the DEIS, and also evaluated as part of the Section 106 analysis for the adverse effects of thiis undertaking.
- The proposed Area of Potential Effect (APE) (see DEIS 3.6.1.2.) for this undertaking is presented as the 65dB DNL that would exist in 2021 as represented by complete implementation of the No Action Alternative. The rationale provided is that the 65 dBA DNL is a standard accepted for the evaluation of historic properties near airports and is consistent with environmental documentation previously completed for Navy operations. In addition, noise levels below 65 dBA DNL are considered to be equivalent to background noise or conversational speech. We disagree with this rationale for APE delineation in part based on the results of NPS monitoring at the NPS Ferry House near Ebey's Landing. This iconic location would be excluded from the 65-

DNL-delineated APE, yet monitoring results have documented noise levels as high as 85 dB Lmax, an SEL of 96.6. In addition, nearly 100% of military overflights at this area exceeded the median ambient noise level (L50) at this site. Growler aircraft have a unique, extremely intrusive noise signature that indirectly impacts the cultural landscape well beyond the 65 dBA DNL. The Reserve is a nationally significant cultural landscape and unit of the NPS system. A more conservative noise metric should be used to delineate the APE in deference to the nationally significant historical resources within the Reserve. The DoD Noise Working Group has determined that supplemental metrics provide a better analogue for the human experience of noise compared with the DNL, which averages noise and does not reflect the actual magnitude of individual noise events or the human experience of those events in real time (DWG, 2009). In the spirit of good decision-making, and in deference to the Reserve's national significance, we believe the APE should be delineated using the LAmax 60 dBA threshold contour line. This threshold was chosen because research demonstrates noise at this level interrupts speech for normal conversations (EPA, 1974). It is a much more appropriate surrogate for gaging impacts to the sights, sounds, feelings and associations of place that area essential qualities of the cultural landscape and will be adversely impacted by this undertaking.

Impacts to Recreation and Recreation Management

- NPS scoping comments requested the Navy consider impacts to the visitor experience in the Reserve, and the impact analysis is provided in Section 4.5.2.2.1 Parks and Recreation Areas Potential Noise Impacts for Ebey's Landing National Historical Reserve (pp. 4-164-168). This analysis is confusing as follows:

  1. p. 4-166, top paragraph states "Depending on the alternative and scenario selected, annual aircraft operations would increase approximately 46 percent to 47 percent over affected environment conditions. These operational conditions would be similar to historic operational levels in the 1970s, 1980s, and 1990s for the NAS Whidbey Island complex and, thus, similar to operational conditions that would have occurred at the time the Ebey's Landing National Historical Reserve was created in 1978 and over most of the reserve's existence." We have observed that the majority of noise-related impacts arise from operations at OLF Coupeville, and these operations are proposed to expand from 6,120 FCLPs per year (current conditions), to a range between 8,300-33,500. This range greatly exceeds the 46-47 percent increase over affected environment conditions. In addition, comparing these future scenarios to past conditions contradicts the wide-ranging perception that Growler aircraft are significantly louder and more intrusive the Prowlers. The past should not be considered prologue when evaluating impacts to recreation and visitor use because circumstances have changed.

  2. Table 4.5-8 presents unclear metrics and it is difficult to understand this analysis. The three POI's within the Reserve would all continue to be exposed to loud or extremely loud noise, and the overall number of events would increase from a minimum of a 36% (scenario C, 8,300 FCLP/year) to a maximum of 474% (Scenario A, 35,100 FCLP/year). Current impacts to visitor experience vary depending upon location in the Reserve, but generally speaking the extreme noise is causing intermittent, significant impacts as noted in the Reserve's GMP, and all scenarios envisioned would increase the frequency of these impacts. We do not understand how the DEIS can conclude that scenario C would have a long-term, slightly beneficial impact on

recreation. We believe the impacts will range from moderate (Scenario c) to major (scenario A) and in all instances these impacts would be more adverse compared to current noise levels.

- The section on Potential Impacts to Recreation Management incorrectly concludes that the proposed actions would have no direct impact on management plans for the Reserve. Expanded operations at OLF Coupeville would adversely affect current operations and several longstanding NPS proposals as follows:
  1. OLF Coupeville is contiguous to, and partly within, the boundaries of the Reserve. It is also adjacent to the southern gateway to the Reserve along State Route 20. This gateway location is geographically notable for management of the Reserve because each year hundreds of thousands of visitors pass through this gateway to visit the area, and there are plans in place to install a South Gateway kiosk and wayside area to orient visitors to the Reserve. Expanding operations at OLF Coupeville would diminish the quality of the visitor experience at the southern gateway and impact the NPS ability to orient visitors to the Reserve.
  2. The NPS owns several parcels directly under the low elevation FCLP flight tracks of OLF Coupeville, including the 113-acre historic Reuble Farmstead. The historic Reuble Farmstead is the base of NPS Operations for the Reserve, which includes offices, workshops, transient quarters, a conference room, and 100-acres of agricultural land farmed under permit. When FCLPs occur, growler aircraft fly directly over NPS offices at approximately 500 feet and noise levels outside routinely exceed 110 dB. Voice and telephone communication is not possible. All staffs must wear ear protection, even inside structures[2]. This extreme noise substantially effects the NPS' ability to achieve its operational mission.

  3. The DEIS provides Conceptual Accident Zones that include significant portions of NPS land at the Reuble Farmstead. This land is currently being used as an operational base for the NPS, but several management options including a land exchange are envisioned for this property. Current uses, and future potential alternative uses, for this property would not be compatible with DoD Land use compatibility guidelines for APZs. For example, residential uses, cultural activities, public assembly, and educational services would not be recommended (Dept. of Defense, 2011).

  4. The GMP includes an analysis of the current boundary of the Reserve, which is a congressional mandate when GMPs are developed. The purpose of the boundary modification analysis is to protect significant resources, values, and visitor experience related to the purpose of the Reserve and to address operational and management issues.

  The current boundary of the Reserve includes the parcel boundary of the 1850 Donation Land Claims Act and is the same as the boundaries of the National Register Historic District that was established in 1973. However, some large agricultural tracts and scenic open space parcels were left out, including the OLF. The OLF includes approximately 468 acres of land immediately adjacent to the Reserve Boundary and occupies a substantial portion of Smith Prairie, one of the three main prairies on Central Whidbey Island. The Boundary Analysis concluded that acquisition of the OLF would improve maintenance of the rural landscape and historic scene, and protect open space for plant and animal habitat. Including the remainder of the OLF in the Reserve boundary and its subsequent retention in public ownership would also assist in

[2] The Reuble Farmstead has several historic structures that are being adaptively reused for NPS operations. These structures lack modern windows and insulation so noise does not substantially attenuate indoors.

protecting the aquifer recharge area in this portion of Smith Prairie and central Whidbey Island, which provides drinking water for the Town of Coupeville.

We understand the Navy desires to expand use of the OLF, but wish to underscore the NPS documented interest in acquiring the property in order to protect the resources and values of the Reserve.

Socioeconomic Effects

- The Reserve was established to protect a rural community, and it provides a wide range of recreational amenities. The tourism generated by this unit of the NPS plays a key part in sustaining the economy of the area and helping to ensure preservation within the Reserve. The NPS estimates the Reserve contributes approximately $21.3 million to the local economy (NPS, 2006), however this estimate (2005 dollars) is based on 1995 visitation data, which does not reflect the continued increases in population and visitation the area is currently experiencing. The actual economic impact of the Reserve is likely much higher than $21.5 million.
- The Reserve is a critical asset for sustaining tourism-based businesses and economic interests, but the DEIS does not evaluate the potential impacts to sectors of the economy that depend upon tourism and tourism-related goods and services and would be affected by expanding operations at OLF Coupeville. Given the significant adverse impacts that occur when Growlers are conducting FCLPs at OLF Coupeville, including the documented impact to local businesses in terms of lost tourist revenue, we believe the document should include an analysis of these impacts. In addition, this analysis should also evaluate impacts to property values from expanding the AICUZ zones within the Reserve. These facts are critical to ensuring that all interested stakeholders fully understand the direct, indirect and cumulative consequences of expanding Growler operations at OLF-Coupeville.

References

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NPS, 2016. National Park Service, U.S. Department of the Interior, Natural Resource Stewardship and Science. Ebey's Landing National Historical Reserve. Acoustical Monitoring Report, Natural Resource Report NPS/ELBA/NRR—2016/1299. 42 pp.

US Navy, 2005. Final Environmental Assessment for Replacement of EA-6B Aircraft with EA-18G Aircraft at Naval Air Station Whidbey Island, Washington, January 2005. 143 pp.

US Navy, 2012. Final Environmental Assessment. Transition of Expeditionary EA-6B Prowler Squadrons to EA-18G Growler. C-1 October 2012. Appendix C Noise Report. 192 pp.

Sandy Fidell's bullet points:

Here are the bullet points that we discussed on the telephone earlier this afternoon:

- The Navy's Draft Environmental Impact Statement (DEIS) does not comply with the requirements of the National Environmental Policy Act (NEPA), because it discloses neither actual noise levels when Field Carrier Landing Practice flight operations are conducted, nor the impacts of such noise exposure on people living near Coupeville Outlying Field;

- The Navy's definition of a "significant" noise impact is obsolete, and contrary to the Navy's claim, is not based on valid scientific information;

- The DEIS contains misleadingly incorrect statements about the basis of its policies on the significance of noise exposure;

- The net effect of the Navy's failures to disclose actual noise levels produced during FCLP flight operations, and its obsolete policy concerning the significance of noise impacts, is to cause the DEIS to under-estimate the size of the population adversely affected by the noise of FCLP operations; and

- To comply with NEPA, the DEIS must be revised to correct its failures to disclose actual noise exposure levels created during the course of Navy flight operations, and to correct its assessment of the degree of noise impacts created by FCLP training, and the size of the residential population affected by such noise.

Sandy

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